PES Environmental, Inc.
Engineering & Environmental Services
AN NV5 COMPANY

April 6, 2022

1358.001.02

Mr. Harry Grant
Fox Rothschild L.L.P.
1001 Fourth Avenue, Suite 4500
Seattle, Washington 98154

Mr. Kenneth Bloch
Keller Rohrbach L.L.P.
1201 Third Avenue, Suite 3200
Seattle, Washington 98101

STATUS REPORT – JULY 2021 THROUGH DECEMBER 2021
MANHATTAN VILLAGE SHOPPING CENTER AND HARRIS PROPERTIES
NORMANDY PARK, WASHINGTON

Dear Mr. Grant and Mr. Bloch:

PES Environmental, Inc. (PES), has prepared this letter to summarize the remediation system operation and maintenance (O&M) activities and groundwater monitoring and sampling performed between July and December, 2021. The work was performed at the Manhattan Village Shopping Center (MVSC) property located at 17835 First Avenue South (the "MVSC property") and the Harris property located at 17817 – 17825 First Avenue South in Normandy Park, Washington (the "Harris property"), collectively referred to as the "Property." The location and current features of the Property are shown on Figures 1 and 2. The O&M and sampling were conducted in accordance with the Remedial Action Work Plan (RAWP[1]), addendum to the RAWP[2] (RAWP Addendum No. 1), and the O&M Plan.[3] A Sampling and Analysis Plan (SAP) is included as Appendix H to the RAWP.

ECOLOGY CORRESPONDENCE

PES had several communications with Chris Maurer at the Washington Department of Ecology (Ecology) regarding the June 2021 RAWP Addendum No. 1 during the reporting period. The RAWP Addendum No. 1 had been prepared to describe the process for completing the cleanup on the Property, including continued operation of the soil vapor extraction system (SVE) and implementing a permeable reactive barrier (PRB) at the north-central edge of the Harris property

[1] PES Environmental, Inc. 2016. *Remedial Action Work Plan, Manhattan Village Shopping Center and Harris Properties, VCP NW1873, Normandy Park, Washington*. October.
[2] PES, 2021. Remedial Action Workplan Addendum No. 1, *Manhattan Village Shopping Center and Harris Properties, VCP NW1873, Normandy Park, Washington*. June 29.
[3] PES Environmental, Inc. 2016. *Operations and Maintenance Plan, Manhattan Village Shopping Center and Harris Properties, VCP NW1873, Normandy Park, Washington.* December.

to cut off continued contribution of tetrachloroethene (PCE) in groundwater to areas downgradient of the Harris property.

Ecology provided their initial response in an e-mail, dated July 16, 2021, and after a follow-up conference call to discuss the e-mail on July 21 (attending: Chris Maurer of Ecology, Cliff Schmitt of Farallon Consulting, Inc., Mike Staton of SLR International Corporation, and Matt Dahl of PES Environmental, Inc.), PES, on behalf of the Harris Family and the Manhattan Tenants in Common, requested a formal opinion letter from Ecology. Ecology's opinion letter dated September 28, 2021[4] determined that the proposed remedial actions met the substantive requirements of Ecology's Model Toxics Control Act (MTCA) Cleanup Regulation (Chapter 173-340 of the Washington Administrative Code [WAC]). Ecology also determined that no further remedial action would likely be necessary to cleanup contamination at the Site under the following conditions:

- **Soil Cleanup.** Placement of a restrictive environmental covenant on those parts of the two properties that are contaminated above cleanup levels and points of compliance.

- **Groundwater Cleanup.** Installation of a PRB at the northern boundary of the Harris property and placement of a restrictive environmental covenant on groundwater use at the Harris property. Continued monitoring of groundwater conditions beneath and downgradient of the Harris property to assess the performance of the PRB.

- **Vapor Intrusion Protection.** Continued operation of the existing SVE system to prevent intrusion of contaminated vapors into structures on the Property.

Ecology also confirmed that the proposed cleanup levels and points of compliance for the Site meet the substantive requirements of MTCA.

- **Cleanup Levels.** Cleanup levels (CULs) for soil and groundwater for PCE (0.05 milligrams per kilogram [mg/kg] in soil and 5 micrograms per liter [µg/L] in groundwater) and for breakdown products trichloroethene (0.03 mg/kg and 5 µg/L), cis-1,2-dichlorethene (160 mg/kg and 16 µg/L), trans-1,2-dichlorethene (1,600 mg/kg and 160 µg/L), and vinyl chloride (0.67 mg/kg and 0.2 µg/L).

- **Points of Compliance.** Standard points of compliance in soil and groundwater including: (1) the Property boundary as the horizontal point of compliance for soil, (2) the upper 15 feet of soil as the vertical point of compliance for soil (for protection of direct contact with contaminated soil), and (3) the uppermost level of the saturated zone to the lowest depth that could be potentially affected as the point of compliance for groundwater.

Following receipt of the Ecology opinion letter, the parties agreed that a round of groundwater samples should be collected, as described below, to provide an understanding of the current

[4] Washington Department of Ecology. 2021. Opinion on Proposed Cleanup of the following Site: Site Name: Normandy Park PCE, Site Address: 17817, 17817, 17825, and 17835 1st Avenue South, Normandy Park, Washington, Cleanup Site ID: 3214, Facility/Site ID: 4181060, VCP Project ID: NW 1873. September 28.

extents of PCE in groundwater, and to verify that the PRB should be implemented as presented in the RAWP Addendum No. 1.

REMEDIATION SYSTEM O&M

Remediation System Description

The expanded SVE system consists of 28 SVE wells (Figure 3). The air sparging (AS) system, shut down in December 2018, remains in standby. The SVE system consists of two well manifolds, positive displacement blower, inline silencers, moisture knockout, condensate storage and transfer pumps, and a discharge stack installed on a concrete pad inside a locked-fence enclosure. Each leg of the SVE manifold includes a balancing valve, sampling port, and flow and vacuum monitoring port. The discharge stack includes a temperature gauge, flow meter, sampling port, and an inline silencer. The SVE blower is mounted inside a galvanized steel and insulated enclosure to dampen the equipment noise.

The SVE wells are installed at two levels within the vadose zone. Shallow screened wells (5 to 20 ft bgs) target the upper vadose zone, and deeper screened wells (20 to 30 ft or 35 ft bgs depending on location) target the lower vadose zone. Detailed descriptions of the AS and SVE systems and O&M procedures are included in the O&M Plan.

Operations and Maintenance

O&M activities during the reporting period included field inspections, testing, and O&M of SVE system components. Specific work included documenting and maintaining the operational status of the SVE equipment, documenting general operating conditions, and responding to system alarms. Brush and weed management were conducted in August 2021.

The SVE system has continued to operate at 13 wells in three areas.

- **Four Star Cleaners Area Wells.** There are seven operating wells including SVE-5, SVE-6, SVE-7, SVE-8, SVE-20, SVE-21, and SVE-22.

- **Former Manhattan Cleaners Area Wells.** There are four operating wells including SVE-10, SVE-23, SVE-24, and SVE-25.

- **QFC Area Wells.** There are two operating wells including SVE-11A and SVE-12A.

The SVE system operated with 10.5 days downtime during the reporting period (94% uptime) All system shutdowns during this period were caused by power outages and condensate level alarms. The low-level alarms appeared to be a result of the condensate knockout low-level switch becoming stuck, so in December 2021, PES removed the level switch and scraped away the accumulated rust and debris from around the actuator arm, which appeared to improve its function. The remediation system has operated with 93% uptime since start-up in 2016 (excluding the 6-month shut-down for rebound testing in 2019). The SVE system operating data is summarized in Table 1.

The SVE system operated with an average total flow rate of approximately 550 standard cubic feet per minute (scfm), with average vacuum of 44 inches of water column (in. w.c.) at the SVE well manifold. Individual SVE wells operated with an average flow of 42 scfm per well.

SVE Sampling. Performance vapor samples are collected periodically from the SVE discharge stack and analyzed by ALS Environmental (an accredited laboratory) for volatile organic compounds (VOCs) by EPA Method TO-15 to evaluate mass removed and to verify compliance with Puget Sound Clean Air Agency (PSCAA) and Ecology discharge criteria. The SVE system stack was sampled in July 2021. The individual SVE wells were not sampled during the reporting period.

PCE Mass Removal. PCE concentration in the SVE stack in July 2021 had increased slightly to 250 micrograms per cubic meter ($\mu g/m^3$) since startup in February and March 2021. The PCE removal rates based on the July sample were 0.012 pounds per day (lb/day) compared to 0.010 lb/day, based on the March 2021 sample results. A total of 2.0 pounds of PCE was removed during the reporting period, and a total of 127.7 pounds of PCE have been removed throughout the lifetimes of the SVE systems that operated from September 2009 through December 2021.

Charts showing SVE effluent PCE concentrations and cumulative PCE mass removal are included as Attachments A1 and A2, and historical SVE well data is included in Attachment A3. Copies of the validated laboratory analytical reports are included in Attachment B.

Regulatory Compliance. The SVE system discharge has remained in compliance with the PSCAA exemption limits of 500 lb/year of total VOCs and is below the Ecology small quantity emission rate of 27 lb/year of PCE.

Sub-Slab Vacuum Monitoring. Sub-slab vapor monitoring points SVS-10, SVS-11, SVS-13, SVS-14, and SVS-15 were monitored for vacuum and field VOC concentrations on July 1, 2021. SVS-10 and SVS-11 are located inside the Four Star Dry Cleaners building, and SVS-13, SVS-14, and SVS-15 are located inside the former Manhattan Cleaners building. Vacuums in sub-slab vapor monitoring points were between 0.1 to 0.7 in. w.c. Field VOC concentrations (as measured with a photoionization detector [PID]) were between 0.3 and 0.4ppmv and were similar to outdoor ambient background readings.

Soil vapor monitoring point SVS-17, located in the alley near SVE-6, was also monitored on July 1 for comparison to sub-slab monitoring points. Vacuum was 3.1 in. w.c. The field VOC concentration (as measured with a PID) was 0.3 ppmv and was similar to outdoor ambient background readings.

The monitoring results are included in Attachment A4.

PERFORMANCE GROUNDWATER MONITORING AND SAMPLING

One round of groundwater performance monitoring and sampling was conducted in 16 select wells in December 2021 to evaluate the current conditions. The scope included water level monitoring in 22 wells and sample collection from 16 wells per the RAWP Addendum No. 1.

- Samples were collected from 12 wells to evaluate natural attenuation of PCE downgradient from the active remediation areas including MW-7, MW-9, MW-17, MW-18, MW-20, DC-7, DC-8, DC-15, DC-17, KMW-3, KMW-7, KMW-8 (See Figure 6); and,

- Samples were collected from 4 wells to evaluate conditions within the former zone of AS including MW-4, MW-10, MW-11, and DC-4 following shutdown of the AS system in December 2018. We were unable to collect a sample from DC-10A as planned, due to low groundwater elevation which prevented accumulation of sufficient groundwater volume in the well for sampling.

Groundwater Level Monitoring

Prior to sample collection, groundwater levels were monitored in the 16 wells listed above, and in MW-2, MW-3, DC-10A, DC-18, DC-20, and KMW-2. Depth to water was measured from the surveyed top of casing (TOC) to the nearest 0.01 foot using an electronic water level probe.

Groundwater Sampling

Groundwater samples were collected using low-flow sampling techniques. For each sampling event, a bladder pump with a dedicated bladder was lowered into each well. Groundwater was purged prior to sample collection, until parameters stabilized. Field parameters measured during sampling consisted of temperature, pH, specific conductance, dissolved oxygen (DO), and oxidation reduction potential (ORP). The pump intake was set at approximately two to three feet below the static water level, generally consistent with previous sampling events. For wells with completed submerged screened intervals, the pump intake was typically set within approximately one to two feet below the top of the screen. Samples were collected into preserved 40-ml volatile organics analysis (VOA) sampling containers and submitted to Fremont Analytical in Seattle, WA (a Washington State accredited laboratory) for analysis of VOCs by EPA Method 8260.

Quality Assurance/Quality Control

Equipment blank, trip blank, and field duplicate samples were collected in accordance with the 2016 SAP. Equipment blank and field duplicate samples are to be collected at a rate of approximately one per twenty samples, and a trip blank is to be submitted with each cooler. Equipment blank and field blank samples were collected and analyzed at the appropriate frequency during the reporting period. One trip blank was analyzed per cooler and one duplicate sample was collected from DC-7.

Water Level Monitoring Results

Water level measurements and groundwater elevations for the December 2021 sampling event are summarized in Table 2, and field parameter measurements are summarized in Table 3. Groundwater elevations in December 2021 ranged from 252.86 to 272.07 feet above North American Vertical Datum of 1988 (NAVD 88).

The groundwater gradients in December 2021 remained generally consistent with historical results, with a north-northwest directional component on the Property, and a more northerly component across SW 178th Street. The gradient across the Property (0.003 ft/ft) is approximately an order of magnitude lower than the gradient to the north of the Property (0.02 ft/ft). The on-Property gradient is estimated from MW-3 to DC-7, and the off-Property gradient is estimated from MW-18 to MW-9. The groundwater elevations and elevation contours are shown on Figure 6. Monitoring well details are included as Attachment C1, and a complete summary of historical groundwater elevations is included as Attachment C2.

Groundwater Sample Analytical Results

The laboratory analytical results for PCE are summarized in Table 3 and shown on Figure 6. A complete summary of historical PCE concentrations in groundwater monitoring wells is included as Attachment C3.

The results from the December 2021 sampling event (16 wells) are summarized as follows:

- PCE was below the laboratory practical quantitation limit (PQL) in MW-9 (0.004 U µg/L);
- PCE was below the CUL (5 µg/L) in eight wells, including MW-4, MW-10, MW-17, MW-20, DC-17, KMW-3, KMW-7, and KMW-8; and,
- PCE was above the CUL in seven wells, including MW-7, MW-11, MW-18, DC-4, DC-7, DC-8, and DC-15 at concentrations between 5.36 and 11 µg/L.

Discussion of Groundwater Monitoring Results

The groundwater data tables and historical time trend plots (Attachment D) indicate the following:

- Northern Harris Property Wells (DC-7, DC-8, DC-15, DC-17, and MW-20). PCE remained above the CUL in DC-7, DC-8, and DC-15. PCE was detected in MW-20 for the first time (0.423 µg/L) due to lower PQLs from the lab (0.400 µg/L vs 1.00µg/L). PCE concentrations in DC-17 were below the CUL for the first time (0.810 µg/L). These results indicate that DC-17 and MW-20 are located near the edges of potentially separate lobes of the PCE plume;
- Wells in SW 178th Street (MW-17, MW-18, KMW-3, KMW-7, and KMW-8). PCE remained above the CUL in MW-18 (9.78 µg/L) and was below the CUL in the other four wells in SW 178th Street as shown on Figure 6. MW-18 is located along a flow path between DC-8 (11.0 µg/L; see above) and MW-7 (8.20 µg/L; see below). MW-17 was slightly below the CUL (4.98 µg/L) and has been fluctuating slightly above and below the CUL over its four sampling events. KMW-3 has been below the CUL (3.40 µg/L) for two consecutive rounds and has been trending downward since October 2018. KMW-8 was below the CUL (1.94 µg/L) for the first time since 2017.

Consistent with historical results, the PCE concentration in KMW-7 remained below the CUL (0.624 µg/L);

- MW-7. PCE concentrations in MW-7 on the Dunn Lumber property increased slightly (8.20 µg/L), but remained well below its historical high concentration measured in 2008 (22.4 µg/L);

- MW-9. PCE has never been detected above the laboratory PQL in this furthest downgradient monitoring well; and,

- Former Air Sparging Area Wells (MW-4, MW-10, MW-11, DC-4). Monitoring in December showed a slight increase in PCE concentrations in the wells within the former AS area. PCE remained below the CUL in MW-4 and MW-10 and increased to just above the CUL in MW-11 (5.59 µg/L) and DC-4 (5.36 µg/L). MW-11 has been increasing slightly since 2018, and the detection in DC-4 was the first since March 2017.

Laboratory Data Validation

The laboratory analytical reports for the groundwater monitoring and sampling events were validated in accordance with the EPA guidelines for organic data review[5]. The data was judged to be acceptable for their intended use. Copies of the laboratory analytical reports and data validation memoranda are included in Attachment B.

RESIDUALS MANAGEMENT AND DISPOSAL

Residuals accumulated during the reporting period included SVE system condensate, groundwater sampling purge water, and decontamination water. SVE system condensate is managed within the operating SVE system until sufficient volume can be generated for disposal. A waste profile sample is collected shortly prior to disposal. Purge water and decontamination water were accumulated in a 55-gallon drum temporarily stored adjacent to the remediation system enclosure pending off-site disposal. No waste was disposed during the reporting period.

SUMMARY AND CONCLUSIONS

SVE discharge stack concentrations and PCE mass removal rates slightly increased during the reporting period, and may be related to expansion of the SVE system between August 31, 2020 and March 1, 2021, and/or related to season fluctuations in soil vapor recovery.

PCE in groundwater continued to attenuate in wells near the northern Harris property boundary. DC-17 dropped to below the CUL for the first time ever, KMW-3 remained below the CUL for the second consecutive sampling round, and KMW-8 dropped below the CUL for the first time in 4 years. PCE was detected at slightly above the cleanup level in two wells, MW-11 (on Harris

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

property) and DC-4 (on MVSC property), both within the influence area of the AS system, for the first time since the AS system was shut off in 2018.

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

Sincerely,
PES ENVIRONMENTAL, INC., an NV5 company

Matthew V. Dahl, P.E.
Associate Engineer

Brian L. O'Neal, P.E.
Principal Engineer

Attachments:

List of Abbreviations
Figures 1 through 6
Tables 1 through 4
Attachment A through D

LIST OF ABBREVIATIONS

AS	Air Sparging
bgs	Below Ground Surface
CUL	MTCA Method A Cleanup Level
DO	Dissolved Oxygen
Ecology	Washington State Department of Ecology
EPA	Environmental Protection Agency
ft	Foot (or feet)
in. w.c.	Inches of Water Column
lb	Pound or Pounds
Manhattan Cleaners	Manhattan Cleaners and Coin-Op Laundry
µg/L	Micrograms per Liter (parts per billion)
$\mu g/m^3$	Micrograms per Cubic Meter
mg/kg	Milligrams per Kilogram (parts per million)
MTCA	Model Toxics Control Act
MVSC	Manhattan Village Shopping Center
NAD 83	North American Datum of 1983
NAVD 88	North American Vertical Datum of 1988
O&M	Operation & Maintenance
ORP	Oxidation Reduction Potential
PCE	Perchloroethylene/Tetrachloroethylene
PES	PES Environmental, Inc.
PID	Photoionization Detector
PQL	Practical Quantitation Limit
ppmv	Parts per Million by Volume
PRB	Permeable Reactive Barrier
PSCAA	Puget Sound Clean Air Agency
PVC	Polyvinyl Chloride
RAWP	Remedial Action Work Plan
SAP	Sampling and Analysis Plan
scfm	Standard Cubic Feet per Minute
SVE	Soil Vapor Extraction
TOC	Top of Casing
VCP	Voluntary Cleanup Program
VOA	Volatile Organic Analysis
VOC	Volatile Organic Compound
WAC	Washington Administrative Code

LIST OF ILLUSTRATIONS

Aerial Photo: April 19, 2015 (Google 2016)

PES Environmental, Inc.
Engineering & Environmental Services

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

FIGURE
1

1358.001.02.016	135800102016_2021SR_1-2	BLO	4/22
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

SW 176th STREET

RESIDENCES

SW 177th STREET

1st AVE SOUTH

RESIDENCES

DUNN LUMBER

DUNN LUMBER

FORMER WATER SUPPLY WELL

COMMERCIAL

SW 178th STREET

2nd AVE SW

TOWN HOUSES

RESIDENCE

RESIDENCE

HARRIS PROPERTY

COMMERCIAL BUILDING

FORMER SEPTIC TANK

VACANT SHED

WELL HOUSE

RETAINING WALL

FORMER TREATMENT SYSTEM

REMEDIATION EQUIPMENT ENCLOSURE

SHED

FORMER MANHATTAN CLEANERS AND COIN-OP LAUNDRY

1st AVE SOUTH

COMMERCIAL

PARKING LOT

RETAINING WALL

STARBUCKS

SECOND BUILDING (VARIOUS SHOPS)

FOUR STAR DRY CLEANERS

DAY CARE

MANHATTAN VILLAGE SHOPPING CENTER

PARKING LOT

QFC BUILDING

FORMER SEPTIC TANK

EXPLANATION

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

0 N 100

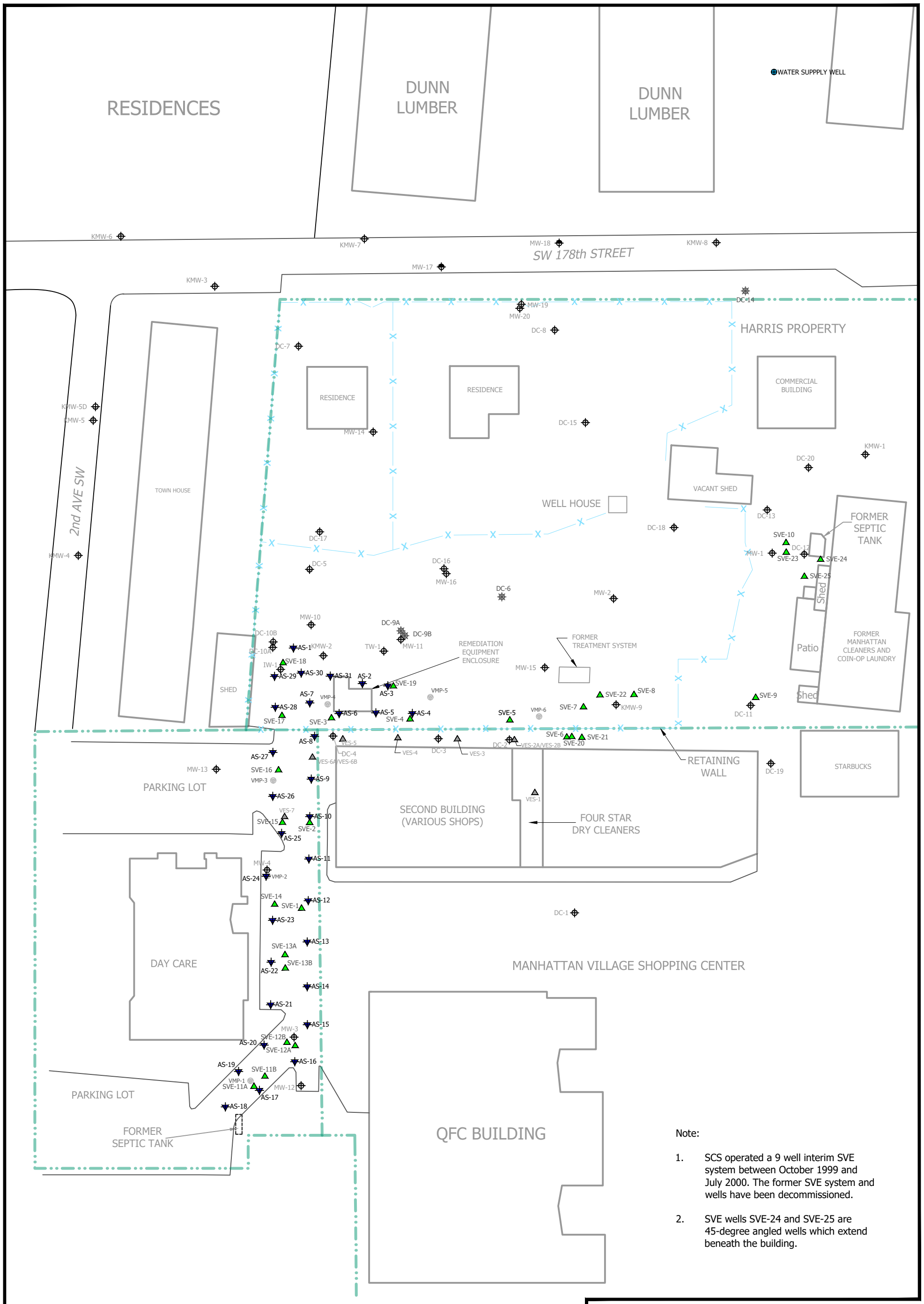
SCALE IN FEET

PES Environmental, Inc.
Engineering & Environmental Services

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

FIGURE 2

1358.001.02.016	135800102016_2021SR_1-2	BLO	4/22
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Note:

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

2. SVE wells SVE-24 and SVE-25 are 45-degree angled wells which extend beneath the building.

PES Environmental, Inc.
Engineering & Environmental Services

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

FIGURE
3

1358.001.02.016	135800102016_2021SR_3	BLO	4/22
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

EXPLANATION

- Approximate Property Boundary
- SVE Trench
- DC-6 Decommissioned or Missing Monitoring Well
- DC-15 Shallow Monitoring Well
- DC-16 Deep Monitoring Well
- SVE-1 Soil Vapor Extraction Well
- AS-1 Air Sparge Well
- TW-1 Pilot Test Well (Kane 2006, ERM 2011)
- KB-3 Boring Location by Others (See Identification List)
- SB-24 Soil Boring (PES, 2018-2021)
- SVS-11 Soil Gas Probe (PES, 2019)

Boring Identification List

Consultant	Boring IDs	Year
SCS	B1 - B4 / S1 - S13 / BH-1 - BH-26 / T-1 - T-4	1998-2000
ADAPT	HA-1	1999
Farallon	SVS-1 - SVS-10 / GP-1 - GP-12 / TP1 - TP5	2005 - 2008
Kane	KB-1 - KB-5 / KGP-1 - KGP-3 / ST6	2003 - 2007
ERM	B-5 - B-18 / SB-1 - SB-9	2008 - 2012
PES	SB-10 - SB-30 / SVS-11 - SVS-17 / EX-1 - EX-27	2018 - 2021

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

Notes:

1. Borings drilled from 1998 through 2012 were not surveyed. Locations are estimated from prior consultants' site maps.
2. Investigation borings B-5, B-7, B-9, B-11, B-12, and B-13 were completed as vapor monitoring probes VMP-1 through VMP-6.
3. The temporary SVE system installed in 1999 included nine wells which operated for approximately one year, and were subsequently decommissioned. Six SVE wells were installed in investigation borings B-1 (VES-1), BH-1 (VES6A/6B), BH-15 (VES-5), BH-16 (VES-4), and BH-17 (VES-3). The other three wells (VES-2A/2B and VES-7) were installed in separate locations.
4. The former septic tank on Harris Property was removed in April 2006. Four sidewall and two bottom samples were collected. Bottom sample ST6 represents the only detection in the 6 samples
5. SCS borings B-1, B-2, and B-3 were completed as 1-inch diameter vapor monitoring probes in 1998. Well construction details are not available.
6. Soil gas sampling probes SVS-10 through SVS-16 are installed beneath the building slabs and requires specialized tools for access to the flush grade monuments. SVS-17 is installed in the asphalt behind Four Star Cleaners and includes a standard 6-inch diameter flush grade monument.
7. Borings EX-1 through EX-15 were advanced in September 2020 to evaluate conditions prior to excavation and constructing an SVE piping trench. The excavation was completed in January 2021 and confirmation samples were collected. The SVE trench was completed in February 2021. See Figure 5 for locations of borings EX-1 through EX-5 and excavation confirmation samples EX-16 through EX-27.

PES Environmental, Inc.
Engineering & Environmental Services

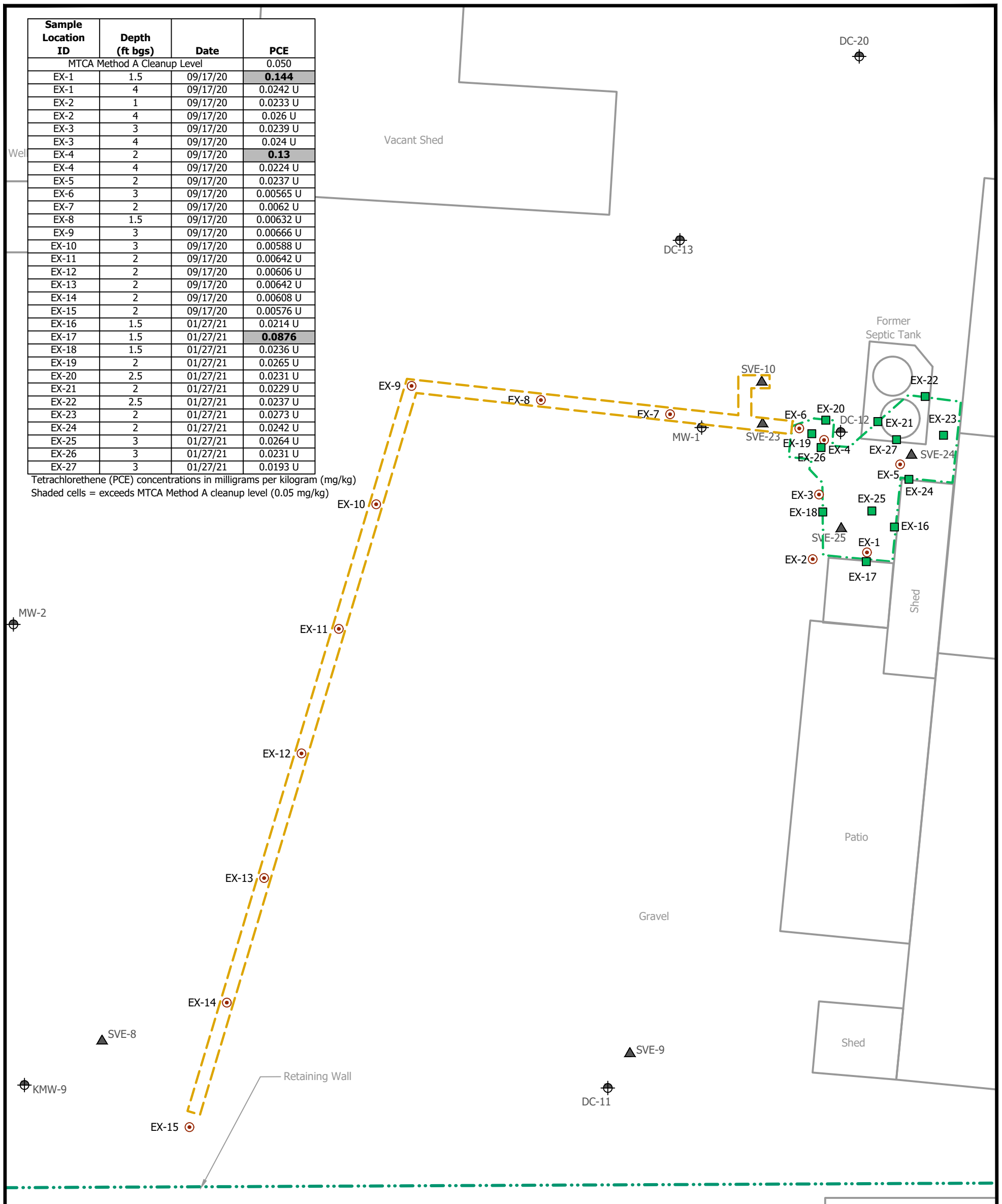
Well and Boring Location Map
Manhattan Village/Harris Properties
17817, and 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE 4

1358.001.02.016	135800102016_2021SR_4-5	BLO	4/22
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

Sample Location ID	Depth (ft bgs)	Date	PCE
MTCA Method A Cleanup Level			0.050
EX-1	1.5	09/17/20	**0.144**
EX-1	4	09/17/20	0.0242 U
EX-2	1	09/17/20	0.0233 U
EX-2	4	09/17/20	0.026 U
EX-3	3	09/17/20	0.0239 U
EX-3	4	09/17/20	0.024 U
EX-4	2	09/17/20	**0.13**
EX-4	4	09/17/20	0.0224 U
EX-5	2	09/17/20	0.0237 U
EX-6	3	09/17/20	0.00565 U
EX-7	2	09/17/20	0.0062 U
EX-8	1.5	09/17/20	0.00632 U
EX-9	3	09/17/20	0.00666 U
EX-10	3	09/17/20	0.00588 U
EX-11	2	09/17/20	0.00642 U
EX-12	2	09/17/20	0.00606 U
EX-13	2	09/17/20	0.00642 U
EX-14	2	09/17/20	0.00608 U
EX-15	2	09/17/20	0.00576 U
EX-16	1.5	01/27/21	0.0214 U
EX-17	1.5	01/27/21	**0.0876**
EX-18	1.5	01/27/21	0.0236 U
EX-19	2	01/27/21	0.0265 U
EX-20	2.5	01/27/21	0.0231 U
EX-21	2	01/27/21	0.0229 U
EX-22	2.5	01/27/21	0.0237 U
EX-23	2	01/27/21	0.0273 U
EX-24	2	01/27/21	0.0242 U
EX-25	3	01/27/21	0.0264 U
EX-26	3	01/27/21	0.0231 U
EX-27	3	01/27/21	0.0193 U

Tetrachlorethene (PCE) concentrations in milligrams per kilogram (mg/kg)
Shaded cells = exceeds MTCA Method A cleanup level (0.05 mg/kg)



EXPLANATION

- Approximate Property Boundary
- SVE Lateral Pipe Trench
- Limits of Excavation
- SVE-1 Soil Vapor Extraction Well
- MW-12 Shallow Monitoring Well
- EX-14 Pre-Trenching and Excavation Sample (PES, 2020)
- EX-27 Excavation Confirmation Sample (PES, 2021)

Notes:

1. EX-1 through EX-15 were advanced in September 2020 to evaluate conditions prior to excavation and trenching.
2. Confirmation samples EX-16 through EX-27 were collected at the bottom and sidewalls of the excavation in January 2021.

0 N 15
SCALE IN FEET

PES Environmental, Inc.
Engineering & Environmental Services

Excavation and SVE Trench Detail
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE 5

1358.001.02.016	135800102016_2021SR_4-5	BLO	4/22
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

MW-9
(252.86)
<0.400

SW 176th STREET

1st AVE SOUTH

RESIDENCES

SW 177th STREET

MW-8
NM

MW-7
(263.86)
8.20

MW-6
NM

DUNN LUMBER

DUNN LUMBER

RESIDENCES

WATER SUPPLY WELL

9.78
(270.25)
MW-18

KMW-8
(270.31)
1.94

KMW-6
NM

KMW-7
(270.17)
0.624

MW-17
(270.23)
4.98

KMW-3
(270.46)
3.40

SW 178th STREET

MW-19
NM

DC-14

MW-20
(270.53)
0.423

DC-8
(270.54)
11.0

MW-5
NM

DC-7
(270.54)
10.0

RESIDENCE

RESIDENCE

HARRIS PROPERTY

COMMERCIAL BUILDING

KMW-5
NM

KMW-5D

MW-14
NM

DC-15
(270.99)
9.31

DC-20
(271.21)

KMW-1
NM

0.810
(271.18)
DC-17

VACANT SHED

WELL HOUSE

DC-13
NM

DC-18
(271.15)

KMW-4
NM

DC-5

DC-16

MW-16
NM

DC-6

MW-2
(271.29)

MW-1

DC-12
NM

1.60
(271.39)
MW-10

5.59
(271.35)

DC-9A
DC-9B
MW-11

DC-10B

DC-10A
(271.47)

KMW-2
(271.43)

CONDOMINIUMS

2nd AVE SW

FORMER TREATMENT SYSTEM

FORMER SEPTIC TANK

FORMER LAUNDROMAT / DRY CLEANER

MW-15
NM

KMW-9
NM

DC-11
NM

MW-13
NM

DC-4
(271.59)
5.36

DC-3
NM

DC-2
NM

RETAINING WALL

DC-19
NM

FORMER DAIRY QUEEN

SECOND BUILDING
(VARIOUS SHOPS)

FOUR STAR
DRY CLEANERS

PARKING LOT

MW-4
(271.63)
2.62

DC-1
NM

DAY CARE

MANHATTAN VILLAGE SHOPPING CENTER

MW-3
(272.07)

MW-12
NM

QFC BUILDING

SUSPECTED SEPTIC TANK

253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272

EXPLANATION

- Approximate Property Boundary
- DC-6 — Missing or Destroyed Monitoring Well
- DC-9B — Abandoned Monitoring Well
- MW-12 — Shallow Monitoring Well
- DC-16 — Deep Monitoring Well
- (272.89) — Groundwater-Level Elevation in feet NAVD 88 December 2021
- 270 — Generalized Groundwater Elevation Contour
- Estimated Groundwater Flow Direction
- 7.42 — Tetrachloroethene (PCE) concentration in micrograms per liter, detected at or above the MTCA Method A cleanup level
- 1.55 — PCE detected below the MTCA Method A cleanup level
- <0.400 — PCE not detected at or above the indicated method reporting limit (MRL)
- NM — Groundwater level not monitored
- * — Groundwater elevation not used for contouring

N

0 100
SCALE IN FEET

PES Environmental, Inc.
Engineering & Environmental Services

Groundwater Elevations and PCE Concentrations – December 2021
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE 6

1358.001.02.016	135800102016_2021SR_6	BLO	4/22
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

TABLES

- Table 1 – SVE System Operation and Maintenance Data
- Table 2 – Groundwater Elevations
- Table 3 – Groundwater Sampling Field Parameters
- Table 4 – Tetrachloroethene Concentrations in Groundwater

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

Date	Time	Operating Days (days)	System Down Time (days)	Electric Meter (KWH)	Blower				Vacuum		SVE Wells[6]	Stack				PCE Removal Rate[4] (lb/day)	PCE Mass Removed[5] (lbs)	Condensate		Notes
					Speed (hz)	Electric Meter (KWH)	Run Time (hr)	Temp. Out (deg F)	Blower (in. w.c.)	Manifold (in. w.c.)		DP (in. w.c.)	Flow[1] (scfm)	VOC[2] (ppm)	Lab PCE[3] (µg/m^3)			DAT Tank (gal)	Holding Tank (gal)	
10/19/16	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	97.5	-	-	per PES previous O&M Data Tables
10/19/16	11:30	0	-	-	51	-	-	85	42	19	1 to 19	2.25	830	-	-	-	-	-	-	SVE system startup, balance wells
10/21/16	-	2	-	-	50	-	-	85	48	25	1 to 19	2.10	800	2.96	-	-	-	-	-	AS system startup, balance wells, noise testing
10/25/16	10:32	6	-	1,274	51	1,285	159	86	42	20	1 to 19	2.15	830	2.39	2,100	0.157	98.5	169	90	Balance SVE and AS wells, stack TO-15 sample
11/2/16	9:00	14	-	-	51	2,859	349	85	45	20	1 to 19	2.3	840	2.51	1,310	0.099	99.6	92	160	Startup monitoring, stack TO-15 sample
11/10/16	10:30	22	-	-	51	4,318	390	80	35	15	1 to 19	2.5	880	1.25	966	0.076	99.7	-	325	Startup monitoring, stack TO-15 sample
11/16/16	10:30	28	-	-	51	5,418	688	80	35	16	1 to 19	2.0	790	2.57	942	0.067	100.6	60	340	Startup monitoring, stack TO-15 sample
11/23/16	9:00	35	-	-	51	6,655	853	75	30	15	1 to 19	-	-	0.86	-	-	-	120	425	Check AS, clean debris from transfer pump
11/30/16	7:00	42	-	-	51	7,914	1,020	75	33	10	1 to 19	2.0	790	-	-	-	-	75	490	Check AS, clean debris from transfer pump
12/12/16	9:00	54	-	3,398	51	10,209	1,312	75	35	10	1 to 19	2.4	860	1.31	288	0.022	101.7	10	580	O&M, stack TO-15 sample, shutdown for GW sampling
12/15/16	-	57	3	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
12/20/16	8:00	59	-	3,704	51	11,115	1,430	75	34	9	1 to 19	2.0	790	-	-	-	-	90	520	Changed blower and compressor oil, check belts
12/28/16	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	750	Respond to DAT Alarm, reset, system operatiing
1/1/17	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	System down on power outage alarm
1/3/17	13:35	-	2	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Responded to alarm, system off - frozen equipment
1/9/17	12:15	72	9	4,444	51	13,211	1,723	65	30	8	1 to 19	2.3	850	-	-	-	-	80	825	Test and restart system after power outage
1/10/17	9:45	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	System check after restart
1/18/17	11:00	81	-	4,976	51	14,751	1,936	75	32	6	1 to 19	2.3	845	0.5	359	0.027	102.4	0	5	O&M and TO-15 sample, condensate disposal
1/29/17	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Reset alarm, system running
2/1/17	6:45	95	-	5,801	51	17,171	2,269	70	32	10	1 to 19	2.2	-	-	-	-	-	85	220	Install check valve, repair transfer pump leak
2/6/17	5:20	-	1	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Power outage. Restarted system.
2/14/17	11:00	107	-	6,558	51	19,370	2,573	75	32	2	1 to 19	2.3	845	1.1	248	0.019	103.0	85	350	O&M, stack TO-15 sample, clean level switches
2/16/17	15:30	-	-	6,685	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	140	365	System check
3/2/17	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Respond to DAT Alarm, reset, system operatiing
3/10/17	9:00	131	-	8,006	51	23,567	3,146	75	35	26	1 to 19	2.3	845	0.2	275	0.021	103.5	100	565	O&M, stack TO-15 sample,shutdown for GW sampling
3/17/17	-	-	7	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
4/8/17	9:40	152	1	9,229	-	27,115	3,653	75	30	24	1 to 19	2.3	845	-	-	-	-	95	670	Power bump/surge, blower low flow alarm, restarted
4/20/17	12:00	-	-	10,022	51	29,101	3,942	75	32	25	1 to 19	2.4	865	0.3	477 EJ	0.037	104.4	93	670	O&M, stack TO-15 sample
4/22/17	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Power bump/surge, blower low flow alarm
4/23/17	15:40	166	1	10,136	51	29,398	3,985	75	30	25	1 to 19	2.3	845	-	-	-	-	92	670	Restarted system
5/29/17	12:00	202	-	12,283	51	35,228	4,845	85	32	32	All except 13A & 14	2.3	835	0.3	137	0.010	105.3	80	680	Closed SVE13A & SVE14, Closed AS10 to AS26
6/16/17	11:00	-	-	-	-	-	-	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Power bump/surge, low flow alarm. Restarted system
6/20/17	8:00	223	-	13,352	51	38,915	5,359	85	34	32	All except 13A & 14	2.3	835	0.4	246	0.018	105.6	68	686	O&M, changed blower and compressor oil, check belts
7/15/17	10:00	248	-	14,596	51	43,192	5,959	94	35	30	All except 13A & 14	2.4	845	0.3	745	0.057	106.6	50	686	O&M , stack TO-15 sample, shut down for GW sampling
7/20/17	14:00	248	5	14,607	51	43,227	5,963	100	40	32	All except 13A & 14	2.3	830	-	-	-	-	48	686	Restarted system after GW sampling, ROI evaluation
8/18/17	9:15	277	-	16,061	51	48,555	6,655	90	38	30	All except 13A & 14	2.3	835	2.4	910	0.068	108.4	20	686	O&M, stack TO-15 sample
9/22/17	10:30	312	-	17,766	51	54,570	7,495	80	40	30	All except 13A & 14	2.4	860	2.0	590	0.046	110.4	10	686	O&M, stack TO-15 sample
10/17/17	8:15	337	-	18,992	51	58,991	8,097	80	40	30	All except 13A & 14	2.3	845	1.3	310	0.024	111.2	0	686	O&M, stack TO-15 sample
10/18/17	-	-	-	-	-	-	-	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Power bump/surge during storm, blower low flow alarm
10/19/17	11:00	339	1	-	51	-	8,127	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Inspect/test system, leave down for GW sampling
10/27/17	10:00	-	8	-	-	-	-	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Restarted system after GW sampling
11/14/17	9:00	-	1	-	-	-	-	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Power bump/surge, blower low flow alarm, restarted
11/16/17	7:00	357	-	20,098	51	62,657	8,576	75	40	32	All except 13A & 14	2.2	825	0.4	230	0.017	111.7	80	775	O&M, stack TO-15 sample
12/7/17	14:00	378	-	21,269	51	66,675	9,084	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	DAT tank high level alarm, system running upon arrival
12/27/17	12:30	-	-	-	-	-	-	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Measure water levels and DO only
12/28/17	7:00	399	-	22,800	51	70,712	9,585	75	35	30	1 to 19	2.2	810	0.2	160	0.012	112.3	90	1100	O&M, stack & SVE well TO-15 samples, disposal

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

Date	Time	Operating Days (days)	System Down Time (days)	Electric Meter (KWH)	Blower				Vacuum		SVE Wells[6]	Stack				PCE Removal Rate[4] (lb/day)	PCE Mass Removed[5] (lbs)	Condensate		Notes
					Speed (hz)	Electric Meter (KWH)	Run Time (hr)	Temp. Out (deg F)	Blower (in. w.c.)	Manifold (in. w.c.)		DP (in. w.c.)	Flow[1] (scfm)	VOC[2] (ppm)	Lab PCE[3] (µg/m^3)			DAT Tank (gal)	Holding Tank (gal)	
1/4/18	8:30	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	O&M, changed blower and compressor oil, check belts
1/5/18	6:45	407	-	22,836	53	72,115	9,773	75	35	27	1 to 19	2.2	810	-	-	-	-	80	80	SVE-10 ROI test, repair transfer pump seal
1/17/18	8:00	419	-	23,641	53	74,327	10,057	-	-	-	1 to 19	-	-	-	-	-	-	80	150	Replace bearings on compressor, belts on both units
1/23/18	10:30	425	-	24,040	53	75,464	10,205	75	35	30	1 to 19	2.3	850	0.2	200	0.015	112.6	80	210	O&M, stack TO-15 sample,shutdown for GW sampling
1/29/18	12:20	425	6	-	-	-	10,205	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
2/20/18	-	-	3	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Power outage on 2/18, equipment frozen, restarted
2/21/18	6:45	445	-	25,223	53	79,279	10,685	70	36	29	1 to 19	2.4	860	0.2	200	0.015	112.9	80	340	O&M, stack TO-15 sample
3/10/18	-	-	1	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Power outage on 3/9, blower low flow alarm, restarted
3/27/18	10:15	478	-	27,159	53	85,473	11,479	76	38	30	1 to 19	2.1	810	0.5	130	0.009	113.3	95	340	O&M, stack TO-15 sample
4/16/18	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Shut down system for GW sampling
4/20/18	-	-	4	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
4/25/18	10:00	502	1	28,566	53	89,903	12,055	80	35	32	1 to 19	2.0	790	0.3	-	-	-	90	340	O&M, stack sample not analyzed - summa faulty.
5/3/18	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Heat exchanger failure. Shut off air sparging.
5/16/18	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Replace heat exchanger motor and transfer pump
5/21/18	8:00	528	1	29,555	53	94,640	12,675	80	35	35	1 to 19	2.1	825	0.3	220	0.016	114.0	82	340	O&M, stack TO-15 sample, raise motor speeds
6/6/18	9:15	-	-	30,403	53	-	-	80	35	26	1 to 19	2.3	845	-	-	-	-	78	340	Respond to heat exchanger alarm, restart
6/7/18	13:35	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Repond to heat exchanger alarm, rewire, restart
6/18/18	13:35	556	-	31,063	53	99,732	13,344	100	30	26	1 to 19	2.5	865	0.4	240	0.019	114.5	82	340	O&M, stack TO-15 sample, blower & comp service
7/16/18	8:00	584	-	32,742	53	104,750	14,013	100	36	21	1 to 19	2.5	845	0.2	240	0.018	115.0	82	340	O&M, stack TO-15 sample, shutdown for GW sampling
7/23/18	8:00	584	7	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
8/17/18	6:30	609	-	34,231	53	109,213	14,611	80	36	20	1 to 19	2.5	860	0.2	400	0.031	115.6	55	340	O&M, stack TO-15 sample
9/12/18	8:00	-	0.5	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Power outage on 9/11, blower low flow alarm, restarted
9/27/18	8:30	649	-	36,633	53	116,536	15,587	80	36	26	1 to 19	2.5	879	0.8	210	0.017	116.5	55	340	O&M, stack and SVE well TO-15 samples
10/13/18	14:00	666	-	-	-	-	15,973	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Shut down system for GW sampling
10/23/18	17:00	666	8	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
10/31/18	8:30	676	-	38,132	53	121,512	16,225	65	40	25	1 to 19	2.5	892	0.4	250	0.020	117.0	50	350	O&M, stack TO-15 sample
11/9/18	8:00	-	-	38,678	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	440	Reset transfer pump level warning alarm.
11/21/18	6:30	697	-	39,416	53	125,554	16,727	80	42	25	1 to 19	2.4	861	0.4	200	0.015	117.4	90	510	O&M, stack TO-15 sample
11/27/18	7:00	700	3	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after alarm on 11/24
11/28/18	11:30	700	1	39,584	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	640	Restarted system after power outage on 11/27
12/6/18	15:00	707	1	40,040	53	127,534	16,970				1 to 19	-	-	-	-	-	-	-	-	System down 12/5 - high knockout level. Restart.
12/13/18	16:00	714	-	40,456	-	128,865	17,132	-	-	-	1 to 19	-	-	-	-	-	117.7	-	845	Power out alarm. Leave down for rebound evaluation.
6/6/19	14:15	714	-	-	40	128,881	17,135	105	40	35	See Note 7	1.0	542	-	-	-	-	142	850	Service blower and compressor. Restart SVE system.
6/7/19	13:20	-	-	40,644	36	-	-	80	41	35	See Note 7	1.2	609	-	-	-	-	148	855	O&M
7/8/19	12:00	746	-	41,049	36	132,369	17,900	100	60	52	See Note 7	1.1	572	0.1	440	0.023	118.3	140	0	O&M, stack TO-15 sample, condensate disposal
8/8/19	13:15	777	-	41,545	36	136,635	18,644	90	41	39	See Note 7	1.1	577	-	-	-	-	10	130	O&M
9/27/19	10:05	785	41	41,718	36	137,619	18,851	80	44	39	See Note 7	1.1	583	-	-	-	-	10	140	O&M, system was off - restarted. Power outage on 8/17. No alarm sent - autodialer battery backup failed.
10/28/19	11:16	816	-	42,127	36	141,045	19,595	70	35	29	See Note 7	1.1	588	0.1	310	0.016	119.7	15	145	O&M, stack TO-15 sample
10/29/19	15:43	818	-	42,141	36	141,158	19,622	72	36	30	See Note 7	1.1	588	0.1	-	-	-	15	145	O&M
11/1/19	14:45	820	-	42,173	36	141,435	19,684	70	38	28	See Note 7	1.1	588	-	-	-	-	145	145	Hi level alarm, service level switch, restart
11/27/19	9:02	846	-	42,496	36	144,106	20,304	68	36	30	See Note 7	1.1	588	-	-	-	-	90	475	Mid-month O&M
12/2/19	-	-	-	-	-	-	-	-	-	-	See Note 7	-	-	-	-	-	-	90	575	DAT high high alarm, serviced, restart
12/13/19	13:45	862	-	42,692	36	145,755	20,680	65	39	30	See Note 7	1.1	-	-	-	-	-	90	680	KO high & KO high high alarm. Serviced.
12/20/19	9:00	868	-	42,776	36	146,472	20,843	70	37	30	See Note 7	1.1	588	-	-	-	-	90	790	O&M. Soil and Water drums removed from site.
12/27/19	9:45	876	-	42,863	36	147,220	21,012	67	35	30	See Note 7	1.1	588	-	-	-	120.8	90	910	KO high and low level switches stuck - service.

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

Date	Time	Operating Days (days)	System Down Time (days)	Electric Meter (KWH)	Blower				Vacuum		SVE Wells[6]	Stack				PCE Removal Rate[4] (lb/day)	PCE Mass Removed[5] (lbs)	Condensate		Notes
					Speed (hz)	Electric Meter (KWH)	Run Time (hr)	Temp. Out (deg F)	Blower (in. w.c.)	Manifold (in. w.c.)		DP (in. w.c.)	Flow[1] (scfm)	VOC[2] (ppm)	Lab PCE[3] (µg/m^3)			DAT Tank (gal)	Holding Tank (gal)	
1/7/20	12:45	887	-	43,001	36	148,395	21,279	72	32	31	See Note 7	1.1	-	-	-	-	-	120	1100	KO high and low level switches stuck - service.
1/14/20	15:54	894	-	43,091	36	149,157	21,449	57	38	32	See Note 7	1.1	-	-	-	-	-	90	1180	KO high and low level switches stuck - service.
1/16/20	9:00	895	-	43,111	36	149,336	21,490	72	44	42	See Note 7	1.1	587	0.5	-	-	-	32	0	O&M, SVE blower and AS compressor serviced.
1/23/20	10:50	902	-	43,217	36	150,245	21,659	75	48	44	See Note 7	1.1	586	-	-	-	-	90	0	KO high level switch stuck - serviced.
2/4/20	8:30	914	-	43,397	36	151,789	21,945	70	48	45	See Note 7	1.0	588	-	-	-	-	160	95	DAT high high alarm, serviced, restart
2/10/20	11:40	918	2.6	43,453	36	152,239	22,027	65	50	45	See Note 7	1.0	591	-	-	-	-	145	180	SVE Low Flow alarm, restarted
2/13/20	11:20	921	-	43,499	36	152,633	22,099	72	45	41	See Note 8	1.0	561	1.0	270	0.014	121.3	145	180	O&M, Well Balancing. TO-15 Stack Sample.
2/19/20	10:30	927	-	43,585	36	153,375	22,242	72	46	40	See Note 8	1.1	587	-	-	-	-	90	320	KO high and low level switches stuck - service.
2/24/20	9:41	932	-	43,656	36	153,990	22,361	72	46	40	See Note 8	1.1	587	-	-	-	-	132	375	DAT high high alarm, serviced, restart
3/2/20	12:12	939	-	43,758	36	154,873	22,532	72	44	40	See Note 8	1.1	587	-	-	-	-	132	475	KO low level switch stuck - service.
3/9/20	13:36	946	-	43,859	36	155,745	22,700	75	46	41	See Note 8	1.1	586	-	-	-	-	28	650	DAT high high alarm, serviced, restart,routine O&M.
3/18/20	-	-	-	-	-	-	-	-	-	-	See Note 8	-	-	-	-	-	-	10	760	KO low level switch stuck - service. Transfer condensate
4/3/20	14:30	971	-	44,218	36	158,826	23,300	75	45	39	See Note 8	1.1	586	-	-	-	-	10	900	KO low level switch stuck - service. Transfer condensate
4/14/20	13:30	982	-	44,372	36	160,140	23,563	80	44	41	See Note 9	1.1	582	-	-	-	-	10	940	KO lo switch stuck - service. Trans cond. Balance wells.
4/16/20	14:30	984	-	44,402	36	160,399	23,613	90	47	42	See Note 9	1.0	550	0.0	-	-	-	10	940	Monitor wells with PID
5/19/20	11:00	1017	-	44,880	36	164,459	24,401	85	49	42	See Note 9	1.1	580	-	260	0.014	122.6	10	940	High level switch stuck - service. TO-15 stack sample.
6/3/20	8:30	1032	-	45,094	36	166,280	24,758	84	49	44	See Note 9	1.1	580	-	-	-	-	15	940	Add oil to blower. Reconnect holding tank level switch.
6/8/20	11:00	1034	2.5	45,133	36	166,577	24,818	80	46	41	See Note 9	1.1	582	-	-	-	-	15	940	Blower fail to run alarm - reset - system started
6/16/20	11:45	1042	-	45,247	36	167,542	25,010	80	46	42	See Note 9	1.1	582	0.2	-	-	-	15	940	O&M; check SVE well field balance; move drums.
7/29/20	8:45	1085	-	45,853	36	172,677	26,038	87	46	41	See Note 9	1.1	579	-	-	-	-	15	940	O&M, SVE blower and AS compressor serviced.
8/28/20	14:48	1115	-	46,278	36	176,277	26,763	98	46	47	See Note 9	1.1	573	0.7	11	0.001	123.3	15	940	O&M, Balance wells. Refresh paint on well markers.
9/8/20	12:40	1125	0.6	46,435	36	177,628	27,012	90	40	37	See Note 9	1.1	577	-	-	-	-	15	940	On site to turn system on after power outage
9/9/20	18:20	1127	-	46,449	36	177,751	27,038	102	47	45	See Note 9	1.1	571	-	-	-	-	15	940	Document fire damage. Troubleshoot autodialer. Repair.
9/24/20	11:20	1141	-	46,668	36	179,660	27,391	90	52	48	See Note 9	1.0	550	0.3	-	-	-	15	940	O&M; Monitor SVE wells, Replace monument lids.
10/8/20	-	-	-	-	-	-	-	-	-	-	See Note 9	-	-	-	-	-	-	-	-	Annual vegetation mowing on Harris property
10/12/20	15:15	1159	-	46,924	36	182,053	27,827	90	49	49	See Note 9	1.1	577	-	-	-	-	19	940	O&M; Electrician spliced phone line. Fix leak on SVE-8.
11/2/20	15:55	1181	-	47,296	36	184,931	28,332	87	52	48	See Note 9	1.0	552	-	-	-	-	19	940	Turn off system for PSE meter changeout
11/3/20	12:45	1181	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Restart system after PSE meter changeout
11/11/20	16:10	1188	-	47,394	36	186,027	28,518	75	55	50	See Note 9	1.0	585	-	-	-	-	60	1000	KO high level alarm - KO pump line clogged. Cleared
11/13/20	11:25	1190	-	47,423	36	186,286	28,562	85	53	51	See Note 9	0.9	524	-	-	-	-	62	1000	Holding Tank High Level alarm maintenance
11/18/20	11:30	1195	-	47,502	36	186,998	28,682	83	54	51	See Note 9	1.0	524	0.0	-	-	-	90	1110	Monitor wells with PID. Sample cond: Cond-111820
12/2/20	15:00	1209	-	47,729	36	189,034	29,021	80	55	51	See Note 9	1.0	555	-	-	-	-	39	1270	KO high level switch stuck - service. Transfer condensate
12/9/20	13:25	1216	-	47,843	36	190,016	29,188	80	56	54	See Note 9	1.0	555	-	-	-	-	25	1450	KO high level switch stuck - service. Transfer condensate
12/18/20	11:05	1225	-	47,987	36	191,285	29,401	80	59	54	See Note 9	1.0	555	0.2	210	0.010	123.9	0	0	Sample: Stack-121820. Marvac removed condensate.
12/23/20	17:10	1230	-	48,070	36	192,034	29,527	78	60	56	See Note 9	1.0	556	-	-	-	-	20	80	Transfer condenste
12/30/20	8:50	1237	-	48,178	36	192,999	29,687	78	60	55	See Note 9	1.0	556	-	-	-	-	70	140	KO high level switch stuck - service. Transfer condensate
1/7/21	15:00	1245	-	48,130	36	194,181	29,885	80	61	56	See Note 9	1.0	555	-	-	-	-	48	290	KO high level switch stuck - service. Transfer condensate
1/13/21	12:55	1251	0.6	48,397	36	194,958	30,016	80	59	55	See Note 9	1.0	555	-	-	-	-	60	350	Restart system after power outage. Transfer condensate
1/19/21	10:05	1257	-	48,492	36	195,813	30,157	80	62	56	See Note 9	1.0	555	-	-	-	-	29	480	Meet Wyser for site walk. Transfer condensate
1/28/21	9:52	1266	-	48,638	36	197,115	30,373	80	62	56	See Note 9	1.0	556	-	-	-	-	10	630	Turn system OFF for SVE Expansion
2/19/21	10:09	1266	21.9	48,469	39	197,124	30,374	66	32	29	See Note 10	1.3	642	2.2	-	-	-	10	640	Turn system ON; Adjust blower speed. Bal SVE wells.
2/22/21	7:00	1268	-	48,469	39	197,495	30,444	75	42	38	See Note 10	1.2	611	-	-	-	-	10	640	Turn system OFF to plumb in SVE-22
2/22/21	16:50	1269	-	48,469	39	197,499	30,444	75	40	36	See Note 10	1.3	636	-	-	-	-	10	640	Turn system ON
2/23/21	8:40	1269	-	48,702	39	197,585	30,460	75	42	39	See Note 10	1.3	636	1.0	-	-	-	10	640	O&M; Balance SVE wells
2/26/21	12:40	1272	-	48,750	39	197,997	30,536	75	42	39	See Note 10	1.3	636	-	-	-	-	119	640	O&M; MarVac remove condensate from holding tank
3/1/21	10:45	1275	-	48,793	39	198,374	30,606	75	42	39	See Note 10	1.3	636	-	-	-	-	10	160	Turn system OFF to service KO

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

Date	Time	Operating Days (days)	System Down Time (days)	Electric Meter (KWH)	Blower				Vacuum		SVE Wells[6]	Stack				PCE Removal Rate[4] (lb/day)	PCE Mass Removed[5] (lbs)	Condensate		Notes
					Speed (hz)	Electric Meter (KWH)	Run Time (hr)	Temp. Out (deg F)	Blower (in. w.c.)	Manifold (in. w.c.)		DP (in. w.c.)	Flow[1] (scfm)	VOC[2] (ppm)	Lab PCE[3] (µg/m^3)			DAT Tank (gal)	Holding Tank (gal)	
3/1/21	14:45	1275	-	48,794	39	198,675	30,607	75	33	39	See Note 11	1.3	636	-	-	-	-	10	160	Turn system ON. SVE-22 connected
3/2/21	10:45	1276	-	48,805	36	198,487	30,630	75	35	36	See Note 11	1.1	585	0.1	180	0.009	124.4	10	160	O&M; Balance SVE wells and collect air samples.
3/12/21	13:30	1286	-	48,933	36	199,562	30,871	78	46	46	See Note 11	1.1	584	0.2	210	0.011	124.5	75	240	O&M; Balance SVE wells and collect stack sample
3/19/21	7:55	1293	-	49,019	36	200,299	31,031	80	45	46	See Note 11	1.1	583	-	-	-	-	62	330	O&M; Balance SVE wells
4/6/21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Investigate and measure catch basin.
4/20/21	11:50	1325	-	2,723	36	204,341	31,800	90	46	46	See Note 11	1.1	583	0.2	-	-	-	50	490	O&M; monitor SVE wells, monitor vapor pins
4/21/21	8:00	1326	-	2,840	36	204,440	31,820	80	49	46	See Note 11	1.1	577	-	-	-	-	60	490	O&M; B&K change oil in SVE blower
5/27/21	12:15	1362	-	8,008	36	208,855	32,688	85	50	47	See Note 11	1.0	553	0.2	-	-	-	80	490	O&M; Monitor SVE field and SVS-17
7/1/21	13:30	1397	-	12,822	36	212,938	33,526	100	38	36	See Note 11	1.0	546	0.2	250	0.012	125.8	81	490	O&M; Monitor SVE field and vapor pins. Sample Stack
8/13/21	10:45	1438	1.9	18,352	36	217,627	34,514	100	45	41	See Note 11	1.0	546	-	-	-	-	81	490	Blower low flow alarm - reset. Spray weeds around site.
10/28/21	12:15	1510	4.2	28,096	36	225,847	36,237	75	49	44	See Note 11	-	-	-	-	-	-	82	500	Blower down due to power outage - restart.
11/11/21	11:45	1520	4.1	29,543	36	227,047	36,473	75	48	42	See Note 11	-	-	-	-	-	-	100	620	System down - KO hi-hi alarm. Transfer condensate
11/24/21	15:35	1532	0.3	31,371	36	228,616	36,778	75	49	-	See Note 11	-	-	-	-	-	-	92	760	System down - KO hi and hi-hi alarms. Transfer cond.
12/8/21	12:15	1546	-	33,398	36	230,630	37,110	80	-	-	See Note 11	-	-	-	-	-	-	80	875	DAT high alarm. Transfer condensate. System running.
12/20/21	16:30	1558	-	35,187	36	231,911	37,403	74	46	44	See Note 11	-	-	-	-	-	127.7	10	1200	DAT high alarm. Transfer condensate. System running.

Notes:

1. Calculated flow rate based on velocity measurements in feet per minute, converted to cfm based on pipe cross sectional area, and normalized to standard conditions
2. As measured with a photoionization detector (PID)
3. SVE system discharge samples analyzed for VOCs using United States Environmental Protection Agency Method TO-15; see laboratory reports for the complete analytical list.
4. Mass Removal Rate = [flow (scfm) * PCE (µg/m$^{3)}$ * 28.3168 (L/cf) / 1,000 (L/m^3) / 453,592,370 (µg/lb) * 60 (min/hour) * 24 (hour/day)]
5. Cumulative mass removed = average mass removal rates from previous and current O&M visit * period run time.
6. SVE wells operating. The numbers refer to the SVE well number: SVE-1, SVE-2, SVE-3, SVE-4, SVE-5, SVE-6, SVE-7, SVE-8, SVE-9, SVE-10, SVE-11a, SVE-11b, SVE-12a, SVE-12b, SVE-13a, SVE-14, SVE-15, SVE-16, SVE-17, SVE-18, and SVE-19.
7. Operating SVE wells include SVE-2, SVE-3, SVE-5, SVE-6, SVE-7, SVE-8, SVE-10, SVE-11A, SVE-12A, SVE-15, SVE-16, and SVE-18.
8. Operating SVE wells include SVE-2, SVE-5, SVE-6, SVE-7, SVE-8, SVE-10, SVE-11A, SVE-12A, SVE-15, and SVE-18.
9. Operating SVE wells include SVE-2, SVE-5, SVE-6, SVE-7, SVE-8, SVE-10, SVE-11A, SVE-12A, SVE-15, SVE-16, and SVE-18.
10. Operating SVE wells include SVE-5, SVE-6, SVE-7, SVE-8, SVE-10, SVE-11A, SVE-12A, SVE-20, SVE-21, SVE-23, SVE-24, and SVE-25.
11. Operating SVE wells include SVE-5, SVE-6, SVE-7, SVE-8, SVE-10, SVE-11A, SVE-12A, SVE-20, SVE-21, SVE-22, SVE-23, SVE-24, and SVE-25.

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

Table 2

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

Monitoring Well	Date	Monument Type	Top of Casing Elevation (feet, NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet)	Groundwater Elevation (feet, NAVD88)
December 2021 Event						
MW-2	12/7/2021	Flush	308.34	32.22-42.22	37.05	271.29
MW-3	12/7/2021	Flush	311.41	35.67-45.67	39.34	272.07
MW-4	12/7/2021	Flush	310.47	33.45-43.45	38.84	271.63
MW-7	12/7/2021	Flush	302.64	34.47-44.47	38.78	263.86
MW-9	12/7/2021	Flush	284.97	31.6-41.6	32.11	252.86
MW-10	12/7/2021	Flush	306.71	31.52-41.52	35.32	271.39
MW-11	12/7/2021	Flush	307.62	31.56-41.56	36.27	271.35
MW-17	12/10/2021	Flush	303.01	27.61-37.61	32.78	270.23
MW-18	12/10/2021	Flush	305.26	29.86-39.86	35.01	270.25
MW-20	12/8/2021	Flush	305.51	29.41-44.41	34.98	270.53
DC-4	12/7/2021	Flush	312.35	43.36-48.36	40.76	271.59
DC-7	12/8/2021	Flush	302.61	34.35-39.35	32.07	270.54
DC-8	12/8/2021	Flush	306.23	36.64-41.64	35.69	270.54
DC-10A	12/7/2021	Flush	307.73	32.01-37.01	36.26	271.47
DC-15	12/8/2021	Flush	307.89	30.7-40.7	36.90	270.99
DC-17	12/8/2021	Flush	305.16	29.81-39.81	33.98	271.18
DC-18	12/7/2021	Flush	309.51	31.58-41.58	38.36	271.15
DC-20	12/7/2021	Flush	310.92	33.8-43.8	39.71	271.21
KMW-2	12/7/2021	Flush	307.04	29.91-39.91	35.61	271.43
KMW-3	12/9/2021	Flush	296.99	24.47-34.47	26.53	270.46
KMW-7	12/10/2021	Flush	301.42	28.77-43.77	31.25	270.17
KMW-8	12/10/2021	Flush	308.16	28.70-43.70	37.85	270.31

NOTES:

1. '-- = not measured or not applicable.
2. Well monument types: flush grade monuments and above ground (AG) monuments.
3. Depth to water is measured from top of well casing.
4. Elevations are reported relative to North American Vertical Datum of 1988 (NAVD 88).
5. Top of casing (TOC) elevations were surveyed by D.R. Strong Consulting Engineers, Inc. in February and May 2013 and by Lanktree Land Surveying, Inc. in July 2015, March 2019, and October 2019.
6. Screened interval depth is estimated using from surveyed elevations (top of casing elevations, ground surface, and monument rim) and field measurements at the time of drilling.
7. Screened intervals completely submerged are shaded.

Table 3

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

Monitoring Well	Date	Depth to Water (feet TOC)	pH (units)	Specific Conductivity (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)
December 2021 Event							
MW-4	12/7/2021	38.84	6.29	356	12.6	9.0	137
MW-7	12/7/2021	38.78	5.93	190	13.1	9.0	190
MW-9	12/7/2021	32.11	5.62	176	11.8	7.1	217
MW-10	12/7/2021	35.32	6.47	274	12.2	7.2	181
MW-11	12/7/2021	36.27	6.36	221	12.8	7.9	192
MW-17	12/10/2021	32.78	6.06	245	12.3	8.1	220
MW-18	12/10/2021	35.01	5.77	231	12.7	8.4	224
MW-20	12/8/2021	34.98	5.88	245	12.5	8.0	199
DC-4	12/7/2021	40.76	6.36	286	13.5	8.3	149
DC-7	12/8/2021	32.07	5.94	249	12.6	8.2	177
DC-8	12/8/2021	35.69	5.75	230	12.8	8.8	207
DC-15	12/8/2021	36.90	5.64	287	12.5	9.4	204
DC-17	12/8/2021	33.98	6.17	254	12.6	7.3	217
KMW-3	12/9/2021	26.53	5.92	206	13.2	7.8	214
KMW-7	12/10/2021	31.25	6.07	245	12.6	7.7	223
KMW-8	12/10/2021	37.85	5.76	91	12.4	8.5	227

NOTES:

1. TOC = top of casing.
2. units: pH standard units reported to 0.01.
3. µS/cm = microsiemens per centimeter @ 25 degrees Celsius (°C).
4. Dissolved Oxygen (DO) reported to 0.1 milligrams per liter (mg/L).
5. ORP = oxidation-reduction potential.
6. mV = millivolts.

Table 4

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

Monitoring Well	Date	Screened Interval Depth (feet TOC)	Depth to Water (feet TOC)	Pump Intake Depth (feet TOC)	PCE (µg/l)	
MTCA Method A Ground Water Cleanup Level					**5**	
December 2021 Event						
MW-4	12/7/2021	33.45-43.45	38.84	41.0	**2.62**	
MW-7	12/7/2021	34.47-44.47	38.78	41.0	**8.20**	
MW-9	12/9/2021	31.6-41.6	32.11	34.0	0.400	U
MW-10	12/9/2021	31.52-41.52	35.32	38.0	**1.60**	
MW-11	12/9/2021	31.56-41.56	36.27	39.0	**5.59**	
MW-17	12/10/2021	27.61-37.61	32.78	35.0	**4.98**	
MW-18	12/10/2021	29.86-39.86	35.01	37.0	**9.78**	
MW-20	12/8/2021	29.41-44.41	34.98	37.5	**0.423**	
DC-4	12/7/2021	43.36-48.36	40.76	44.5	**5.36**	
DC-7	12/8/2021	34.35-39.35	32.07	35.5	**10.0**	**J**
DC-8	12/8/2021	36.64-41.64	35.69	37.5	**11.0**	
DC-15	12/8/2021	30.7-40.7	36.90	38.0	**9.31**	
DC-17	12/9/2021	29.81-39.81	33.98	35.0	**0.810**	
KMW-3	12/9/2021	24.47-34.47	26.53	29.0	**3.40**	
KMW-7	12/10/2021	28.77-43.77	31.25	34.0	**0.624**	
KMW-8	12/10/2021	28.70-43.70	37.85	40.0	**1.94**	

NOTES:

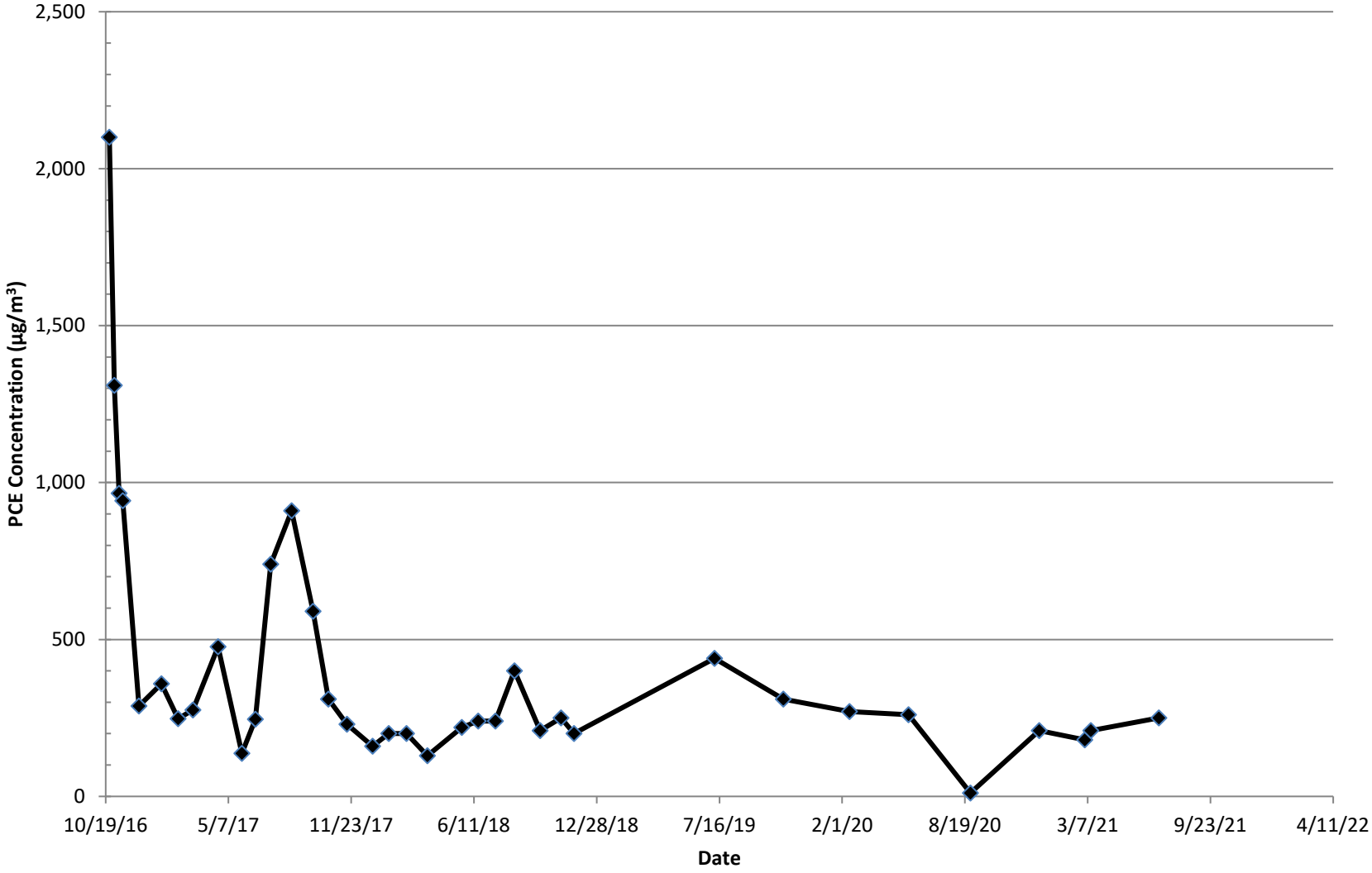
1. Tetrachloroethene (PCE) concentrations in migrograms per liter (µg/l). Other VOCs, if detected above the laboratory practical quantitation limit (PQL), are listed in Table D3.
2. Groundwater samples analyzed using USEPA Method 8260C.
3. U = concentration not detected at or above the laboratory PQL.
4. J = the identification of the analyte is acceptable; the reported value is an estimate
5. Detected concentrations are shown in **bold.**
6. Concentrations exceeding the cleanup level are **bold and shaded**.
7. Screened interval depth is estimated using from surveyed elevations (top of casing elevations, ground surface, and monument rim) and field measurements at the time of drilling.
8. Pump intake depth and depth to water is measured in feet below the top of casing (TOC).
9. Screened intervals completely submerged are shaded.

ATTACHMENT A

O&M CHARTS AND SUMMARY TABLES

- Chart E1 – SVE Discharge PCE Concentrations
- Chart E2 – Cumulative PCE Removed
- Table E3 – Historical SVE Leg Analytical Results
- Table E4 - Soil Vapor Monitoring Probe Field Data

Attachment A1
SVE Discharge PCE Concentrations
Manhattan Village/Harris Properties



Attachment A2
Cumulative PCE Removed
Manhattan Village/Harris Properties

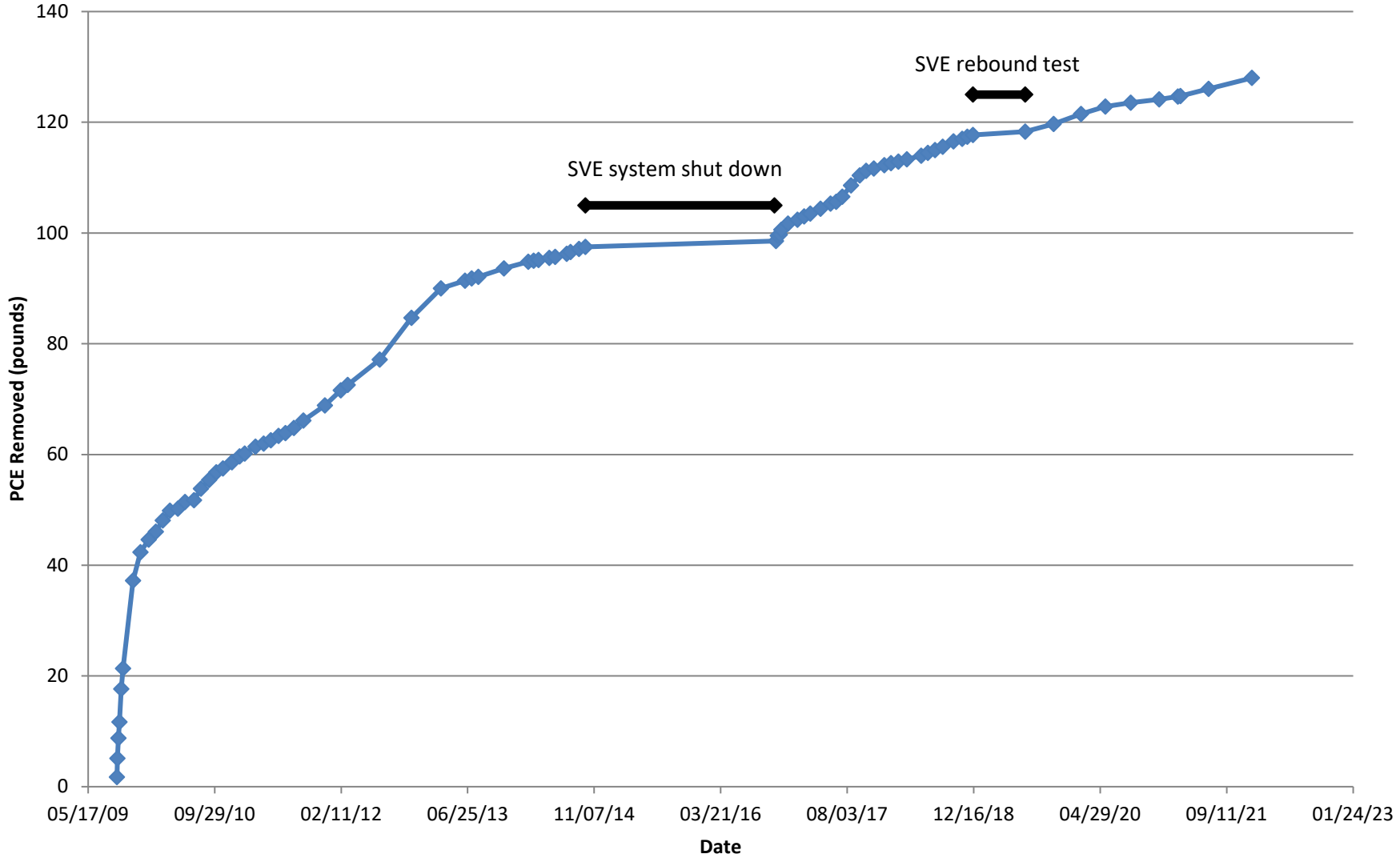


Table A3
Historical SVE Leg Analytical Results
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

SVE Well	Screen Depth (ft bgs)	06/04/10 (µg/m3)	01/26/11 (µg/m3)	12/09/11 (µg/m3)	11/05/13 (µg/m3)	12/12/16 (µg/m3)	12/12/16 (scfm)	12/28/17 (µg/m3)	12/28/17 (scfm)	09/27/18 (µg/m3)	09/27/18 (scfm)	03/02/21 (µg/m3)	03/02/21 (scfm)
SVE-1	10-35	3,900	1,300	1,600	1,010	499	46	120	44	160	48	--	--
SVE-2	10-35	740	1,600	1,300	977	374	47	210	39	240	43	--	--
SVE-3	10-30	7,100	2,900	2,500	1,920	338	44	50	38	750	47	--	--
SVE-4	10-30	330	870	910	412	332	32	59	26	130	41	--	--
SVE-5	10-30	5,100	2,500	1,200	499	716	31	170	20	270	53	--	45
SVE-6	5-10	17,000	4,400	2,900	827	1,490	30	150	47	950	39	--	38
SVE-7	10-30	3,300	1,700	1,400	723	1,130	31	350	32	400	30	--	45
SVE-8	10-30	590	800	6	448	703	30	320	18	210	51	--	47
SVE-9	10-30	880	740	750	325	379	36	170	17	170	23	--	--
SVE-10	10-30	1,300	1,100	1,300	709	398	49	290	42	270	48	--	45
SVE-11A	5.0-20.0	--	--	--	--	136	35	68	47	100	46	--	43
SVE-11B	20.0-35.0	--	--	--	--	149	47	24	37	68	41	--	--
SVE-12A	5.0-20.0	--	--	--	--	217	23	310	33	110	31	--	38
SVE-12B	20.0-35.0	--	--	--	--	295	48	54	35	160	37	--	--
SVE-13A	5.0-20.0	--	--	--	--	145	48	36	43	94	46	--	--
SVE-13B	20.0-35.0	--	--	--	--	241	47	180	47	96	41	--	--
SVE-14	19.6-34.6	--	--	--	--	144	37	120	38	110	44	--	--
SVE-15	20.6-35.0	--	--	--	--	373	35	190	30	170	39	--	--
SVE-16	20.5-34.8	--	--	--	--	587	35	310	44	330	36	--	--
SVE-17	19.9-29.9	--	--	--	--	65.1	43	5.9	35	3.3	11	--	--
SVE-18	19.8-29.8	--	--	--	--	380	42	59	48	110	40	--	--
SVE-19	20.0-30.0	--	--	--	--	147	44	39	49	71	45	--	--
SVE-20	10.3-25.4	--	--	--	--	--	--	--	--	--	--	170	46
SVE-21	25.7-37.7	--	--	--	--	--	--	--	--	--	--	310	44
SVE-22	20.6-35.6	--	--	--	--	--	--	--	--	--	--	230	45
SVE-23	20.3-35.3	--	--	--	--	--	--	--	--	--	--	170	46
SVE-24	10.3-22.6	--	--	--	--	--	--	--	--	--	--	69	46
SVE-25	22.8-35.7	--	--	--	--	--	--	--	--	--	--	7.4	57
Stack	--	3,000	2,050	1,300	730	280	860	160	160	210	879	180	585

Notes:

1. Tetrachloroethene (PCE) concentrations in micrograms per cubic meter (µg/m^3)
2. Flow rate in standard cubic feet per minute (scfm)
3. '-- = NA or NM
4. SVE-1 through SVE-10 have been operating since 2009. Flow rates for wells and stack are not readily available through 2013.
5. SVE-11A through SVE-19 have been operating since 2016
6. SVE-20 through SVE-25 have been operating since 2021

Table A4
Soil Vapor Monitoring Probe Field Data
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

	SVS-10		SVS-11		SVS-13		SVS-14		SVS-15		SVS-17	
Date	Vacuum (in. w.c.)	VOC[1] (ppm)	Vacuum (in. w.c.)	VOC[1] (ppm)	Vacuum (in. w.c.)	VOC[1] (ppm)	Vacuum (in. w.c.)	VOC[1] (ppm)	Vacuum (in. w.c.)	VOC (ppm)	Vacuum (in. w.c.)	VOC[1] (ppm)
4/20/21	0.1	0.5	0.2	0.4	0.7	0.3	0.2	0.3	0.2	0.3	2.8	0.5
5/27/21	-	-	-	-	-	-	-	-	-	-	3.2	0.1
7/1/21	0.1	0.4	0.2	0.4	0.7	0.2	0.3	0.2	0.2	0.1	3.1	0.3

Notes:

1. As measured with a photoionization detector (PID)
2. Unable to remove stainless steel cover to monitor VP-12 and VP-16
3. VP-10 may not have an air tight seal

in. w.c. = inches of water column

ppm = parts per million as measured with a photo-ionization detector (PID)

ATTACHMENT B

LABORATORY REPORTS AND DATA VALIDATION MEMORANDA

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

LABORATORY REPORT

July 28, 2021

Matt Dahl
PES Environmental
2101 Fourth Ave., Suite 1310
Seattle, WA 98121

RE: MVSC / 1358.001.02.015

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on July 6, 2021. For your reference, this analysis has been assigned our service request number P2103611.

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

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

Respectfully submitted,

ALS | Environmental

By Sue Anderson at 2:01 pm, Jul 28, 2021
Sue Anderson
Project Manager

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

Client: PES Environmental
Project: MVSC / 1358.001.02.015

Service Request No: P2103611

CASE NARRATIVE

The sample was received intact under chain of custody on July 6, 2021 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

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

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.3 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-008
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

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

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

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental
Service Request: P2103611
Project ID: MVSC / 1358.001.02.015

Date Received: 7/6/2021
Time Received: 12:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pfl (psig)	TO-15 - VOC Cans
STACK-070121	P2103611-001	Air	7/1/2021	14:35	1SS01320	-1.76	6.74	X

Air - Chain of Custody Record & Analytical Service Request

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

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

ALS Project No. R2103611

Company Name & Address (Reporting Information)	PES Environmental 2101 4th Ave #1310, Seattle, WA, 98121
Project Name	MVSC
Project Number	13358.001.02.015
Project Manager	Matt Dahl
P.O. # / Billing Information	
Phone	206-529-3980
Fax	206-529-3985
Email Address for Result Reporting	mdahl@pesenv.com
Sampler (Print & Sign)	Sean Kounovsky
ALS Contact:	

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15	Comments e.g. Actual Preservative or specific instructions
STACK-070121	1	7/1/21	1435	1320	—	-30	-4	1L	X	

Report Tier Levels - please select

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

EDD required Yes / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

	Date	Time		Date	Time
Relinquished by: (Signature)	7/1/21	1500	Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)	7-6-21	1200

Cooler / Blank Temperature ____ °C

5 of 16

ALS Environmental
Sample Acceptance Check Form

Client: PES Environmental Work order: P2103611

Project: MVSC / 1358.001.02.015

Sample(s) received on: 7/6/21 Date opened: 7/6/21 by: ADAVID

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

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

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2103611-001.01	1.0 L Source Silonite Canister					

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **STACK-070121** ALS Project ID: P2103611
Client Project ID: **MVSC / 1358.001.02.015** ALS Sample ID: P2103611-001

Test Code: EPA TO-15 Date Collected: 7/1/21
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 7/6/21
Analyst: Topacio Zavala Date Analyzed: 7/26/21
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01320

Initial Pressure (psig): -1.76 Final Pressure (psig): 6.74

Canister Dilution Factor: 1.66

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**2.4**	2.2	**1.4**	1.3	
75-71-8	Dichlorodifluoromethane (CFC 12)	**5.5**	2.2	**1.1**	0.44	
74-87-3	Chloromethane	ND	2.2	ND	1.0	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.2	ND	0.31	
75-01-4	Vinyl Chloride	ND	2.2	ND	0.86	
106-99-0	1,3-Butadiene	ND	2.2	ND	0.98	
74-83-9	Bromomethane	ND	2.2	ND	0.56	
75-00-3	Chloroethane	ND	2.2	ND	0.82	
64-17-5	Ethanol	**23**	22	**12**	12	
75-05-8	Acetonitrile	ND	2.2	ND	1.3	
107-02-8	Acrolein	ND	4.6	ND	2.0	
67-64-1	Acetone	**42**	22	**18**	9.1	
75-69-4	Trichlorofluoromethane (CFC 11)	**4.4**	2.1	**0.78**	0.38	
67-63-0	2-Propanol (Isopropyl Alcohol)	**45**	4.2	**18**	1.7	
107-13-1	Acrylonitrile	ND	4.2	ND	1.9	
75-35-4	1,1-Dichloroethene	ND	2.2	ND	0.54	
75-09-2	Methylene Chloride	ND	2.2	ND	0.62	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.2	ND	0.69	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	2.2	ND	0.29	
75-15-0	Carbon Disulfide	ND	4.2	ND	1.3	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	ND	0.55	
75-34-3	1,1-Dichloroethane	ND	2.2	ND	0.55	
1634-04-4	Methyl tert-Butyl Ether	ND	2.2	ND	0.60	
108-05-4	Vinyl Acetate	ND	23	ND	6.5	
78-93-3	2-Butanone (MEK)	**10**	4.2	**3.5**	1.4	

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

Client: **PES Environmental**
Client Sample ID: **STACK-070121** ALS Project ID: P2103611
Client Project ID: **MVSC / 1358.001.02.015** ALS Sample ID: P2103611-001

Test Code: EPA TO-15 Date Collected: 7/1/21
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 7/6/21
Analyst: Topacio Zavala Date Analyzed: 7/26/21
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01320

Initial Pressure (psig): -1.76 Final Pressure (psig): 6.74

Canister Dilution Factor: 1.66

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**5.9**	2.2	**1.5**	0.54	
141-78-6	Ethyl Acetate	ND	4.2	ND	1.2	
110-54-3	n-Hexane	ND	2.2	ND	0.61	
67-66-3	Chloroform	**7.0**	2.2	**1.4**	0.45	
109-99-9	Tetrahydrofuran (THF)	**4.5**	4.2	**1.5**	1.4	
107-06-2	1,2-Dichloroethane	ND	2.2	ND	0.53	
71-55-6	1,1,1-Trichloroethane	ND	2.2	ND	0.40	
71-43-2	Benzene	ND	2.2	ND	0.68	
56-23-5	Carbon Tetrachloride	ND	2.1	ND	0.34	
110-82-7	Cyclohexane	ND	4.2	ND	1.2	
78-87-5	1,2-Dichloropropane	ND	2.2	ND	0.47	
75-27-4	Bromodichloromethane	ND	2.2	ND	0.32	
79-01-6	Trichloroethene	ND	2.1	ND	0.39	
123-91-1	1,4-Dioxane	ND	2.2	ND	0.60	
80-62-6	Methyl Methacrylate	ND	4.2	ND	1.0	
142-82-5	n-Heptane	ND	2.2	ND	0.53	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	ND	0.48	
108-10-1	4-Methyl-2-pentanone	ND	4.2	ND	1.0	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	ND	0.47	
79-00-5	1,1,2-Trichloroethane	ND	2.2	ND	0.40	
108-88-3	Toluene	ND	2.2	ND	0.57	
591-78-6	2-Hexanone	ND	4.2	ND	1.0	
124-48-1	Dibromochloromethane	ND	2.2	ND	0.25	
106-93-4	1,2-Dibromoethane	ND	2.2	ND	0.28	
123-86-4	n-Butyl Acetate	ND	4.2	ND	0.87	

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **STACK-070121** ALS Project ID: P2103611
Client Project ID: **MVSC / 1358.001.02.015** ALS Sample ID: P2103611-001

Test Code: EPA TO-15 Date Collected: 7/1/21
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 7/6/21
Analyst: Topacio Zavala Date Analyzed: 7/26/21
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS01320

Initial Pressure (psig): -1.76 Final Pressure (psig): 6.74

Canister Dilution Factor: 1.66

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	2.2	ND	0.46	
127-18-4	Tetrachloroethene	**250**	2.2	**37**	0.32	
108-90-7	Chlorobenzene	ND	2.2	ND	0.47	
100-41-4	Ethylbenzene	ND	2.2	ND	0.50	
179601-23-1	m,p-Xylenes	ND	4.2	ND	0.96	
75-25-2	Bromoform	ND	2.2	ND	0.21	
100-42-5	Styrene	ND	2.2	ND	0.51	
95-47-6	o-Xylene	ND	2.2	ND	0.51	
111-84-2	n-Nonane	ND	2.2	ND	0.42	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	ND	0.32	
98-82-8	Cumene	ND	2.2	ND	0.44	
80-56-8	alpha-Pinene	ND	2.2	ND	0.39	
103-65-1	n-Propylbenzene	ND	2.2	ND	0.44	
622-96-8	4-Ethyltoluene	ND	2.2	ND	0.45	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	ND	0.45	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	ND	0.44	
100-44-7	Benzyl Chloride	ND	4.4	ND	0.84	
541-73-1	1,3-Dichlorobenzene	ND	2.2	ND	0.37	
106-46-7	1,4-Dichlorobenzene	ND	2.2	ND	0.36	
95-50-1	1,2-Dichlorobenzene	ND	2.2	ND	0.37	
5989-27-5	d-Limonene	ND	2.2	ND	0.39	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.2	ND	0.43	
120-82-1	1,2,4-Trichlorobenzene	ND	4.2	ND	0.56	
91-20-3	Naphthalene	ND	2.2	ND	0.41	
87-68-3	Hexachlorobutadiene	ND	2.2	ND	0.20	

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P2103611
Client Project ID: **MVSC / 1358.001.02.015** ALS Sample ID: P210726-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/21
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.52	ND	0.25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.52	ND	0.074	
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
106-99-0	1,3-Butadiene	ND	0.52	ND	0.24	
74-83-9	Bromomethane	ND	0.52	ND	0.13	
75-00-3	Chloroethane	ND	0.52	ND	0.20	
64-17-5	Ethanol	ND	5.3	ND	2.8	
75-05-8	Acetonitrile	ND	0.53	ND	0.32	
107-02-8	Acrolein	ND	1.1	ND	0.48	
67-64-1	Acetone	ND	5.2	ND	2.2	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.51	ND	0.091	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	1.0	ND	0.41	
107-13-1	Acrylonitrile	ND	1.0	ND	0.46	
75-35-4	1,1-Dichloroethene	ND	0.52	ND	0.13	
75-09-2	Methylene Chloride	ND	0.52	ND	0.15	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.52	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.0	ND	0.32	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.54	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.52	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.5	ND	1.6	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	

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

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P2103611

Client Project ID: **MVSC / 1358.001.02.015** ALS Sample ID: P210726-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Wida Ang Date Analyzed: 7/26/21

Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.52	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.52	ND	0.15	
67-66-3	Chloroform	ND	0.53	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	1.0	ND	0.34	
107-06-2	1,2-Dichloroethane	ND	0.52	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.52	ND	0.095	
71-43-2	Benzene	ND	0.52	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.51	ND	0.081	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.52	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.52	ND	0.078	
79-01-6	Trichloroethene	ND	0.51	ND	0.095	
123-91-1	1,4-Dioxane	ND	0.52	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.52	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.53	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	1.0	ND	0.24	
10061-02-6	trans-1,3-Dichloropropene	ND	0.51	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.52	ND	0.095	
108-88-3	Toluene	ND	0.52	ND	0.14	
591-78-6	2-Hexanone	ND	1.0	ND	0.24	
124-48-1	Dibromochloromethane	ND	0.52	ND	0.061	
106-93-4	1,2-Dibromoethane	ND	0.52	ND	0.068	
123-86-4	n-Butyl Acetate	ND	1.0	ND	0.21	

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P2103611

Client Project ID: **MVSC / 1358.001.02.015** ALS Sample ID: P210726-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Wida Ang Date Analyzed: 7/26/21

Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.52	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.52	ND	0.077	
108-90-7	Chlorobenzene	ND	0.52	ND	0.11	
100-41-4	Ethylbenzene	ND	0.52	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.52	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.53	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.52	ND	0.11	
80-56-8	alpha-Pinene	ND	0.53	ND	0.095	
103-65-1	n-Propylbenzene	ND	0.52	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.53	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.52	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.20	
541-73-1	1,3-Dichlorobenzene	ND	0.53	ND	0.088	
106-46-7	1,4-Dichlorobenzene	ND	0.52	ND	0.087	
95-50-1	1,2-Dichlorobenzene	ND	0.53	ND	0.088	
5989-27-5	d-Limonene	ND	0.52	ND	0.093	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	ND	0.10	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	ND	0.13	
91-20-3	Naphthalene	ND	0.52	ND	0.099	
87-68-3	Hexachlorobutadiene	ND	0.52	ND	0.049	

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **MVSC / 1358.001.02.015** ALS Project ID: P2103611

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Collected: 7/1/21
Analyst: Wida Ang Date(s) Received: 7/6/21
Sample Type: 1.0 L Silonite Summa Canister(s) Date(s) Analyzed: 7/26/21
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P210726-MB	**97**	**106**	**114**	70-130	
Lab Control Sample	P210726-LCS	**99**	**104**	**118**	70-130	
Duplicate Lab Control Sample	P210726-DLCS	**98**	**108**	**118**	70-130	
STACK-070121	P2103611-001	**95**	**109**	**113**	70-130	

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

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2103611
Client Project ID: **MVSC / 1358.001.02.015** ALS Sample ID: P210726-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/21
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
115-07-1	Propene	210	174	168	**83**	**80**	56-128	4	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	191	189	**91**	**90**	71-112	1	25	
74-87-3	Chloromethane	206	115	113	**56**	**55**	53-126	2	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	216	192	195	**89**	**90**	62-121	1	25	
75-01-4	Vinyl Chloride	208	179	179	**86**	**86**	63-123	0	25	
106-99-0	1,3-Butadiene	210	189	193	**90**	**92**	63-135	2	25	
74-83-9	Bromomethane	212	201	200	**95**	**94**	71-112	1	25	
75-00-3	Chloroethane	204	199	197	**98**	**97**	66-117	1	25	
64-17-5	Ethanol	998	805	798	**81**	**80**	57-117	1	25	
75-05-8	Acetonitrile	202	189	187	**94**	**93**	59-131	1	25	
107-02-8	Acrolein	436	395	393	**91**	**90**	71-123	1	25	
67-64-1	Acetone	1,030	876	870	**85**	**84**	60-117	1	25	
75-69-4	Trichlorofluoromethane (CFC 11)	204	188	188	**92**	**92**	71-114	0	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	408	382	383	**94**	**94**	61-124	0	25	
107-13-1	Acrylonitrile	410	390	390	**95**	**95**	65-130	0	25	
75-35-4	1,1-Dichloroethene	212	196	198	**92**	**93**	74-114	1	25	
75-09-2	Methylene Chloride	208	193	194	**93**	**93**	75-112	0	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	210	187	188	**89**	**90**	57-127	1	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	205	209	**96**	**98**	73-114	2	25	
75-15-0	Carbon Disulfide	428	381	386	**89**	**90**	70-113	1	25	
156-60-5	trans-1,2-Dichloroethene	212	197	199	**93**	**94**	76-119	1	25	
75-34-3	1,1-Dichloroethane	212	188	190	**89**	**90**	70-114	1	25	
1634-04-4	Methyl tert-Butyl Ether	212	214	217	**101**	**102**	72-118	1	25	
108-05-4	Vinyl Acetate	1,100	752	770	**68**	**70**	56-137	3	25	
78-93-3	2-Butanone (MEK)	412	394	399	**96**	**97**	74-121	1	25	

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

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2103611
Client Project ID: **MVSC / 1358.001.02.015** ALS Sample ID: P210726-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/21
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	208	185	186	**89**	**89**	73-117	0	25	
141-78-6	Ethyl Acetate	422	523	530	**124**	**126**	59-161	2	25	
110-54-3	n-Hexane	212	178	180	**84**	**85**	55-130	1	25	
67-66-3	Chloroform	214	194	197	**91**	**92**	71-114	1	25	
109-99-9	Tetrahydrofuran (THF)	400	347	353	**87**	**88**	73-114	1	25	
107-06-2	1,2-Dichloroethane	208	189	192	**91**	**92**	71-119	1	25	
71-55-6	1,1,1-Trichloroethane	206	195	198	**95**	**96**	73-119	1	25	
71-43-2	Benzene	204	183	186	**90**	**91**	72-113	1	25	
56-23-5	Carbon Tetrachloride	210	196	198	**93**	**94**	67-123	1	25	
110-82-7	Cyclohexane	416	376	384	**90**	**92**	70-119	2	25	
78-87-5	1,2-Dichloropropane	206	181	185	**88**	**90**	70-118	2	25	
75-27-4	Bromodichloromethane	210	197	200	**94**	**95**	74-119	1	25	
79-01-6	Trichloroethene	206	194	198	**94**	**96**	74-115	2	25	
123-91-1	1,4-Dioxane	208	200	204	**96**	**98**	77-124	2	25	
80-62-6	Methyl Methacrylate	416	501	516	**120**	**124**	78-126	3	25	
142-82-5	n-Heptane	210	187	191	**89**	**91**	70-119	2	25	
10061-01-5	cis-1,3-Dichloropropene	210	201	205	**96**	**98**	81-126	2	25	
108-10-1	4-Methyl-2-pentanone	416	381	389	**92**	**94**	73-129	2	25	
10061-02-6	trans-1,3-Dichloropropene	202	202	207	**100**	**102**	80-127	2	25	
79-00-5	1,1,2-Trichloroethane	206	201	205	**98**	**100**	78-117	2	25	
108-88-3	Toluene	206	201	212	**98**	**103**	70-118	5	25	
591-78-6	2-Hexanone	404	401	419	**99**	**104**	74-132	5	25	
124-48-1	Dibromochloromethane	210	232	244	**110**	**116**	69-137	5	25	
106-93-4	1,2-Dibromoethane	208	235	246	**113**	**118**	76-128	4	25	
123-86-4	n-Butyl Acetate	406	419	440	**103**	**108**	75-134	5	25	

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

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2103611
Client Project ID: **MVSC / 1358.001.02.015** ALS Sample ID: P210726-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/21
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
111-65-9	n-Octane	210	194	204	**92**	**97**	68-120	5	25	
127-18-4	Tetrachloroethene	206	227	239	**110**	**116**	63-130	5	25	
108-90-7	Chlorobenzene	206	208	218	**101**	**106**	70-118	5	25	
100-41-4	Ethylbenzene	206	214	223	**104**	**108**	71-123	4	25	
179601-23-1	m,p-Xylenes	412	417	436	**101**	**106**	67-127	5	25	
75-25-2	Bromoform	208	254	266	**122**	**128**	65-149	5	25	
100-42-5	Styrene	206	238	249	**116**	**121**	76-132	4	25	
95-47-6	o-Xylene	206	213	223	**103**	**108**	69-124	5	25	
111-84-2	n-Nonane	208	190	199	**91**	**96**	64-127	5	25	
79-34-5	1,1,2,2-Tetrachloroethane	206	207	216	**100**	**105**	69-128	5	25	
98-82-8	Cumene	208	217	228	**104**	**110**	69-125	6	25	
80-56-8	alpha-Pinene	214	225	236	**105**	**110**	68-129	5	25	
103-65-1	n-Propylbenzene	208	218	229	**105**	**110**	70-127	5	25	
622-96-8	4-Ethyltoluene	210	238	250	**113**	**119**	69-127	5	25	
108-67-8	1,3,5-Trimethylbenzene	206	203	213	**99**	**103**	66-129	4	25	
95-63-6	1,2,4-Trimethylbenzene	204	217	228	**106**	**112**	63-142	6	25	
100-44-7	Benzyl Chloride	402	485	509	**121**	**127**	73-145	5	25	
541-73-1	1,3-Dichlorobenzene	206	242	255	**117**	**124**	67-136	6	25	
106-46-7	1,4-Dichlorobenzene	204	228	241	**112**	**118**	63-134	5	25	
95-50-1	1,2-Dichlorobenzene	206	235	248	**114**	**120**	64-139	5	25	
5989-27-5	d-Limonene	208	218	228	**105**	**110**	63-137	5	25	
96-12-8	1,2-Dibromo-3-chloropropane	370	466	492	**126**	**133**	72-145	5	25	
120-82-1	1,2,4-Trichlorobenzene	388	435	458	**112**	**118**	62-154	5	25	
91-20-3	Naphthalene	198	214	225	**108**	**114**	62-156	5	25	
87-68-3	Hexachlorobutadiene	210	257	271	**122**	**129**	55-142	6	25	

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

MEMORANDUM

TO: Project File **DATE:** March 6, 2022

FROM: Matt Dahl

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.02.015

TASK: EIM Data Validation Level EPA2A – July 2021 - Air Samples

LAB: ALS Environmental Service Request Numbers: P2103611

One stack sample were collected July 1, 2021. Samples were collected from the Manhattan Village Shopping Center in Normandy Park, Washington. The samples were analyzed for 75 VOCs by USEPA Method TO-15 (*Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air*, Second Edition, EPA/625/R-96/010B, January 1999). Laboratory analytical services were provided by ALS Environmental (ALS) (also known as ALS Global (ALS)) of Simi Valley, California. Analytical data are reported under ALS's service request numbers **P2103611**.

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

DATA QUALIFICATIONS

Guidelines established by USEPA for a limited data validation review of analytical data were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2017).

DATA VALIDATION

Completeness

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

Sample Collection and Preservation

The laboratory supplied Source Cans (1-Liter) for the air samples. The samples were shipped, delivered by FedEx, and received in good condition by the laboratory. The samples were

collected, handled, and delivered in an appropriate manner. No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analyses for VOCs by Method TO-15 were performed within the 30-day recommended holding time limit for the air samples collected in a Source Can. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. Case narrative and laboratory notes do not indicate that there are any issues with calibrations.

Method Blank Results

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

Trip Blank Results

A trip blank was not required for the VOCs by TO-15 analyses. No qualifications were warranted due to the lack of a trip blank for this method.

Field Duplicate Analyses

No field duplicates were required or collected during this field event.

Laboratory Duplicate/Replicate Analyses

Laboratory replicates were not performed. Refer to the Laboratory Control Sample section for additional precision information.

Surrogate Recoveries

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

Laboratory Control Samples

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

Matrix Spike/Matrix Spike Duplicates

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

Other Quality Control Issues

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

Quantitation Limits

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

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

Data Assessment

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

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

PES Environmental, Inc.
Matt Dahl
2101 Fourth Avenue, Suite 1310
Seattle, WA 98121

RE: MVSC
Work Order Number: 2112190

December 15, 2021

Attention Matt Dahl:

Fremont Analytical, Inc. received 20 sample(s) on 12/10/2021 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *12/15/2021*

CLIENT: PES Environmental, Inc.
Project: MVSC
Work Order: 2112190

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2112190-001	MW-4-120721	12/07/2021 12:50 PM	12/10/2021 4:55 PM
2112190-002	MW-7-120721	12/07/2021 4:20 PM	12/10/2021 4:55 PM
2112190-003	DC-4-120721	12/07/2021 2:15 PM	12/10/2021 4:55 PM
2112190-004	MW-20-120821	12/08/2021 9:00 AM	12/10/2021 4:55 PM
2112190-005	DC-15-120821	12/08/2021 10:00 AM	12/10/2021 4:55 PM
2112190-006	DC-8-120821	12/08/2021 11:15 AM	12/10/2021 4:55 PM
2112190-007	DC-7-120821	12/08/2021 2:15 PM	12/10/2021 4:55 PM
2112190-008	EQ-120821	12/08/2021 2:45 PM	12/10/2021 4:55 PM
2112190-009	MW-100-120821	12/08/2021 3:30 PM	12/10/2021 4:55 PM
2112190-010	MW-9-120921	12/09/2021 8:45 AM	12/10/2021 4:55 PM
2112190-011	MW-10-120921	12/09/2021 10:10 AM	12/10/2021 4:55 PM
2112190-012	MW-11-120921	12/09/2021 11:35 AM	12/10/2021 4:55 PM
2112190-013	DC-17-120921	12/09/2021 1:00 PM	12/10/2021 4:55 PM
2112190-014	KMW-3-120921	12/09/2021 2:45 PM	12/10/2021 4:55 PM
2112190-015	KMW-8-121021	12/10/2021 11:10 AM	12/10/2021 4:55 PM
2112190-016	MW-18-121021	12/10/2021 11:50 AM	12/10/2021 4:55 PM
2112190-017	KMW-7-121021	12/10/2021 12:40 PM	12/10/2021 4:55 PM
2112190-018	MW-17-121021	12/10/2021 1:30 PM	12/10/2021 4:55 PM
2112190-019	W-Drum4-121021	12/10/2021 2:30 PM	12/10/2021 4:55 PM
2112190-020	TB-121021	12/03/2021 1:55 PM	12/10/2021 4:55 PM

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

Case Narrative

WO#: **2112190**
Date: **12/15/2021**

CLIENT: PES Environmental, Inc.
Project: MVSC

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

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

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

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

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

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

Client: PES Environmental, Inc.
Collection Date: 12/7/2021 12:50:00 PM
Project: MVSC
Lab ID: 2112190-001
Matrix: Groundwater
Client Sample ID: **MW-4-120721**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 3:01:04 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 3:01:04 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 3:01:04 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 3:01:04 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 3:01:04 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 3:01:04 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 3:01:04 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 3:01:04 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 3:01:04 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 3:01:04 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 3:01:04 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 3:01:04 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 3:01:04 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 3:01:04 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 3:01:04 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Tetrachloroethene (PCE)	2.62	0.400		µg/L	1	12/13/2021 3:01:04 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 3:01:04 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 3:01:04 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 3:01:04 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 3:01:04 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 3:01:04 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 3:01:04 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM

Client: PES Environmental, Inc.
Collection Date: 12/7/2021 12:50:00 PM
Project: MVSC
Lab ID: 2112190-001
Matrix: Groundwater
Client Sample ID: **MW-4-120721**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 3:01:04 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 3:01:04 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 3:01:04 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 3:01:04 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 3:01:04 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 3:01:04 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 3:01:04 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 3:01:04 PM
Surr: Dibromofluoromethane	103	80 - 120		%Rec	1	12/13/2021 3:01:04 PM
Surr: Toluene-d8	95.1	80 - 120		%Rec	1	12/13/2021 3:01:04 PM
Surr: 1-Bromo-4-fluorobenzene	92.9	80 - 120		%Rec	1	12/13/2021 3:01:04 PM

Client: PES Environmental, Inc.
Collection Date: 12/7/2021 4:20:00 PM
Project: MVSC
Lab ID: 2112190-002
Matrix: Groundwater
Client Sample ID: **MW-7-120721**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 4:01:24 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 4:01:24 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 4:01:24 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 4:01:24 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 4:01:24 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 4:01:24 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 4:01:24 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 4:01:24 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 4:01:24 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 4:01:24 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 4:01:24 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 4:01:24 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 4:01:24 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 4:01:24 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 4:01:24 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Tetrachloroethene (PCE)	8.20	0.400		µg/L	1	12/13/2021 4:01:24 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 4:01:24 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 4:01:24 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 4:01:24 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 4:01:24 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 4:01:24 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 4:01:24 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM

Client: PES Environmental, Inc.
Collection Date: 12/7/2021 4:20:00 PM
Project: MVSC
Lab ID: 2112190-002
Matrix: Groundwater
Client Sample ID: **MW-7-120721**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 4:01:24 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 4:01:24 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 4:01:24 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 4:01:24 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 4:01:24 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 4:01:24 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 4:01:24 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 4:01:24 PM
Surr: Dibromofluoromethane	102	80 - 120		%Rec	1	12/13/2021 4:01:24 PM
Surr: Toluene-d8	95.4	80 - 120		%Rec	1	12/13/2021 4:01:24 PM
Surr: 1-Bromo-4-fluorobenzene	92.6	80 - 120		%Rec	1	12/13/2021 4:01:24 PM

Client: PES Environmental, Inc.
Collection Date: 12/7/2021 2:15:00 PM
Project: MVSC
Lab ID: 2112190-003
Matrix: Groundwater
Client Sample ID: **DC-4-120721**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 4:31:31 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 4:31:31 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 4:31:31 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 4:31:31 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 4:31:31 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 4:31:31 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 4:31:31 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 4:31:31 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 4:31:31 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 4:31:31 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 4:31:31 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 4:31:31 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 4:31:31 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 4:31:31 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 4:31:31 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Tetrachloroethene (PCE)	5.36	0.400		µg/L	1	12/13/2021 4:31:31 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 4:31:31 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 4:31:31 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 4:31:31 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 4:31:31 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 4:31:31 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 4:31:31 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM

Client: PES Environmental, Inc.
Collection Date: 12/7/2021 2:15:00 PM
Project: MVSC
Lab ID: 2112190-003
Matrix: Groundwater
Client Sample ID: **DC-4-120721**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 4:31:31 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 4:31:31 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 4:31:31 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 4:31:31 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 4:31:31 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 4:31:31 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 4:31:31 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 4:31:31 PM
Surr: Dibromofluoromethane	102	80 - 120		%Rec	1	12/13/2021 4:31:31 PM
Surr: Toluene-d8	94.7	80 - 120		%Rec	1	12/13/2021 4:31:31 PM
Surr: 1-Bromo-4-fluorobenzene	93.0	80 - 120		%Rec	1	12/13/2021 4:31:31 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 9:00:00 AM
Project: MVSC
Lab ID: 2112190-004
Matrix: Groundwater
Client Sample ID: **MW-20-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 5:01:39 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 5:01:39 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 5:01:39 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 5:01:39 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 5:01:39 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 5:01:39 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 5:01:39 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 5:01:39 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 5:01:39 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 5:01:39 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 5:01:39 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 5:01:39 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 5:01:39 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 5:01:39 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 5:01:39 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Tetrachloroethene (PCE)	0.423	0.400		µg/L	1	12/13/2021 5:01:39 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 5:01:39 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 5:01:39 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 5:01:39 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 5:01:39 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 5:01:39 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 5:01:39 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 9:00:00 AM
Project: MVSC
Lab ID: 2112190-004
Matrix: Groundwater
Client Sample ID: **MW-20-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 5:01:39 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 5:01:39 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 5:01:39 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 5:01:39 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 5:01:39 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 5:01:39 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 5:01:39 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 5:01:39 PM
Surr: Dibromofluoromethane	102	80 - 120		%Rec	1	12/13/2021 5:01:39 PM
Surr: Toluene-d8	95.2	80 - 120		%Rec	1	12/13/2021 5:01:39 PM
Surr: 1-Bromo-4-fluorobenzene	92.1	80 - 120		%Rec	1	12/13/2021 5:01:39 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 10:00:00 AM
Project: MVSC
Lab ID: 2112190-005
Matrix: Groundwater
Client Sample ID: **DC-15-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 5:31:45 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 5:31:45 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 5:31:45 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 5:31:45 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 5:31:45 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 5:31:45 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 5:31:45 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 5:31:45 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 5:31:45 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 5:31:45 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 5:31:45 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 5:31:45 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 5:31:45 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 5:31:45 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 5:31:45 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Tetrachloroethene (PCE)	9.31	0.400		µg/L	1	12/13/2021 5:31:45 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 5:31:45 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 5:31:45 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 5:31:45 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 5:31:45 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 5:31:45 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 5:31:45 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 10:00:00 AM
Project: MVSC
Lab ID: 2112190-005
Matrix: Groundwater
Client Sample ID: **DC-15-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 5:31:45 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 5:31:45 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 5:31:45 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 5:31:45 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 5:31:45 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 5:31:45 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 5:31:45 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 5:31:45 PM
Surr: Dibromofluoromethane	102	80 - 120		%Rec	1	12/13/2021 5:31:45 PM
Surr: Toluene-d8	95.4	80 - 120		%Rec	1	12/13/2021 5:31:45 PM
Surr: 1-Bromo-4-fluorobenzene	92.3	80 - 120		%Rec	1	12/13/2021 5:31:45 PM

Client: PES Environmental, Inc. **Collection Date:** 12/8/2021 11:15:00 AM
Project: MVSC
Lab ID: 2112190-006 **Matrix:** Groundwater
Client Sample ID: **DC-8-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 6:01:53 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 6:01:53 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 6:01:53 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 6:01:53 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 6:01:53 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 6:01:53 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 6:01:53 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 6:01:53 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 6:01:53 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 6:01:53 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 6:01:53 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 6:01:53 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 6:01:53 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 6:01:53 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 6:01:53 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Tetrachloroethene (PCE)	11.0	0.400		µg/L	1	12/13/2021 6:01:53 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 6:01:53 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 6:01:53 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 6:01:53 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 6:01:53 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 6:01:53 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 6:01:53 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 11:15:00 AM
Project: MVSC
Lab ID: 2112190-006
Matrix: Groundwater
Client Sample ID: **DC-8-120821**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 34731		Analyst: TN
Styrene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 6:01:53 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 6:01:53 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 6:01:53 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 6:01:53 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 6:01:53 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 6:01:53 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 6:01:53 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 6:01:53 PM
Surr: Dibromofluoromethane	102	80 - 120		%Rec	1	12/13/2021 6:01:53 PM
Surr: Toluene-d8	95.1	80 - 120		%Rec	1	12/13/2021 6:01:53 PM
Surr: 1-Bromo-4-fluorobenzene	92.6	80 - 120		%Rec	1	12/13/2021 6:01:53 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 2:15:00 PM
Project: MVSC
Lab ID: 2112190-007
Matrix: Groundwater
Client Sample ID: **DC-7-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 6:31:59 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 6:31:59 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 6:31:59 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 6:31:59 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 6:31:59 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 6:31:59 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 6:31:59 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 6:31:59 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 6:31:59 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 6:31:59 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 6:31:59 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 6:31:59 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 6:31:59 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 6:31:59 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 6:31:59 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Tetrachloroethene (PCE)	10.0	0.400		µg/L	1	12/13/2021 6:31:59 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 6:31:59 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 6:31:59 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 6:31:59 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 6:31:59 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 6:31:59 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 6:31:59 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 2:15:00 PM
Project: MVSC
Lab ID: 2112190-007
Matrix: Groundwater
Client Sample ID: **DC-7-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 6:31:59 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 6:31:59 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 6:31:59 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 6:31:59 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 6:31:59 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 6:31:59 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 6:31:59 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 6:31:59 PM
Surr: Dibromofluoromethane	103	80 - 120		%Rec	1	12/13/2021 6:31:59 PM
Surr: Toluene-d8	96.7	80 - 120		%Rec	1	12/13/2021 6:31:59 PM
Surr: 1-Bromo-4-fluorobenzene	93.8	80 - 120		%Rec	1	12/13/2021 6:31:59 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 2:45:00 PM
Project: MVSC
Lab ID: 2112190-008
Matrix: Groundwater
Client Sample ID: **EQ-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 7:02:06 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 7:02:06 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 7:02:06 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 7:02:06 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 7:02:06 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 7:02:06 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 7:02:06 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 7:02:06 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 7:02:06 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 7:02:06 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 7:02:06 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 7:02:06 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 7:02:06 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 7:02:06 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 7:02:06 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Tetrachloroethene (PCE)	ND	0.400		µg/L	1	12/13/2021 7:02:06 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 7:02:06 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 7:02:06 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 7:02:06 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 7:02:06 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 7:02:06 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 7:02:06 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 2:45:00 PM
Project: MVSC
Lab ID: 2112190-008
Matrix: Groundwater
Client Sample ID: **EQ-120821**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 34731		Analyst: TN
Styrene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 7:02:06 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 7:02:06 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 7:02:06 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 7:02:06 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 7:02:06 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 7:02:06 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 7:02:06 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 7:02:06 PM
Surr: Dibromofluoromethane	104	80 - 120		%Rec	1	12/13/2021 7:02:06 PM
Surr: Toluene-d8	95.3	80 - 120		%Rec	1	12/13/2021 7:02:06 PM
Surr: 1-Bromo-4-fluorobenzene	92.8	80 - 120		%Rec	1	12/13/2021 7:02:06 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 3:30:00 PM
Project: MVSC
Lab ID: 2112190-009
Matrix: Groundwater
Client Sample ID: **MW-100-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 7:32:16 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 7:32:16 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 7:32:16 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 7:32:16 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 7:32:16 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 7:32:16 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 7:32:16 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 7:32:16 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 7:32:16 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 7:32:16 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 7:32:16 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 7:32:16 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 7:32:16 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 7:32:16 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 7:32:16 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Tetrachloroethene (PCE)	10.4	0.400		µg/L	1	12/13/2021 7:32:16 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 7:32:16 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 7:32:16 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 7:32:16 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 7:32:16 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 7:32:16 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 7:32:16 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 3:30:00 PM
Project: MVSC
Lab ID: 2112190-009
Matrix: Groundwater
Client Sample ID: **MW-100-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 7:32:16 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 7:32:16 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 7:32:16 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 7:32:16 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 7:32:16 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 7:32:16 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 7:32:16 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 7:32:16 PM
Surr: Dibromofluoromethane	104	80 - 120		%Rec	1	12/13/2021 7:32:16 PM
Surr: Toluene-d8	97.4	80 - 120		%Rec	1	12/13/2021 7:32:16 PM
Surr: 1-Bromo-4-fluorobenzene	92.7	80 - 120		%Rec	1	12/13/2021 7:32:16 PM

Client: PES Environmental, Inc.
Collection Date: 12/9/2021 8:45:00 AM
Project: MVSC
Lab ID: 2112190-010
Matrix: Groundwater
Client Sample ID: **MW-9-120921**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 8:02:23 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 8:02:23 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 8:02:23 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 8:02:23 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 8:02:23 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 8:02:23 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 8:02:23 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 8:02:23 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 8:02:23 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 8:02:23 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 8:02:23 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 8:02:23 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 8:02:23 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 8:02:23 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 8:02:23 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Tetrachloroethene (PCE)	ND	0.400		µg/L	1	12/13/2021 8:02:23 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 8:02:23 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 8:02:23 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 8:02:23 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 8:02:23 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 8:02:23 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 8:02:23 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM

Client: PES Environmental, Inc.
Collection Date: 12/9/2021 8:45:00 AM
Project: MVSC
Lab ID: 2112190-010
Matrix: Groundwater
Client Sample ID: **MW-9-120921**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 8:02:23 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 8:02:23 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 8:02:23 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 8:02:23 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 8:02:23 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 8:02:23 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 8:02:23 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 8:02:23 PM
Surr: Dibromofluoromethane	103	80 - 120		%Rec	1	12/13/2021 8:02:23 PM
Surr: Toluene-d8	95.7	80 - 120		%Rec	1	12/13/2021 8:02:23 PM
Surr: 1-Bromo-4-fluorobenzene	92.7	80 - 120		%Rec	1	12/13/2021 8:02:23 PM

Client: PES Environmental, Inc.
Collection Date: 12/9/2021 10:10:00 AM
Project: MVSC
Lab ID: 2112190-011
Matrix: Groundwater
Client Sample ID: **MW-10-120921**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 8:32:30 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 8:32:30 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 8:32:30 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 8:32:30 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 8:32:30 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 8:32:30 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 8:32:30 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 8:32:30 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 8:32:30 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 8:32:30 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 8:32:30 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 8:32:30 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 8:32:30 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 8:32:30 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 8:32:30 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Tetrachloroethene (PCE)	1.60	0.400		µg/L	1	12/13/2021 8:32:30 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 8:32:30 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 8:32:30 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 8:32:30 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 8:32:30 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 8:32:30 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 8:32:30 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM

Client: PES Environmental, Inc.
Collection Date: 12/9/2021 10:10:00 AM
Project: MVSC
Lab ID: 2112190-011
Matrix: Groundwater
Client Sample ID: **MW-10-120921**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D			Batch ID: 34731			Analyst: TN
Styrene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 8:32:30 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 8:32:30 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 8:32:30 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 8:32:30 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 8:32:30 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 8:32:30 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 8:32:30 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 8:32:30 PM
Surr: Dibromofluoromethane	103	80 - 120		%Rec	1	12/13/2021 8:32:30 PM
Surr: Toluene-d8	96.2	80 - 120		%Rec	1	12/13/2021 8:32:30 PM
Surr: 1-Bromo-4-fluorobenzene	94.7	80 - 120		%Rec	1	12/13/2021 8:32:30 PM

Client: PES Environmental, Inc.
Collection Date: 12/9/2021 11:35:00 AM
Project: MVSC
Lab ID: 2112190-012
Matrix: Groundwater
Client Sample ID: **MW-11-120921**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 9:02:36 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 9:02:36 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 9:02:36 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 9:02:36 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 9:02:36 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 9:02:36 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 9:02:36 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 9:02:36 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 9:02:36 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 9:02:36 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 9:02:36 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 9:02:36 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 9:02:36 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 9:02:36 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 9:02:36 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Tetrachloroethene (PCE)	5.59	0.400		µg/L	1	12/13/2021 9:02:36 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 9:02:36 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 9:02:36 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 9:02:36 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 9:02:36 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 9:02:36 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 9:02:36 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM

Client: PES Environmental, Inc.
Collection Date: 12/9/2021 11:35:00 AM
Project: MVSC
Lab ID: 2112190-012
Matrix: Groundwater
Client Sample ID: **MW-11-120921**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D			Batch ID: 34731			Analyst: TN
Styrene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 9:02:36 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 9:02:36 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 9:02:36 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 9:02:36 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 9:02:36 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 9:02:36 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 9:02:36 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 9:02:36 PM
Surr: Dibromofluoromethane	102	80 - 120		%Rec	1	12/13/2021 9:02:36 PM
Surr: Toluene-d8	95.6	80 - 120		%Rec	1	12/13/2021 9:02:36 PM
Surr: 1-Bromo-4-fluorobenzene	92.4	80 - 120		%Rec	1	12/13/2021 9:02:36 PM

Client: PES Environmental, Inc.
Collection Date: 12/9/2021 1:00:00 PM
Project: MVSC
Lab ID: 2112190-013
Matrix: Groundwater
Client Sample ID: **DC-17-120921**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 11:03:06 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 11:03:06 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 11:03:06 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 11:03:06 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 11:03:06 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 11:03:06 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 11:03:06 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 11:03:06 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 11:03:06 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 11:03:06 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 11:03:06 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 11:03:06 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 11:03:06 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 11:03:06 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 11:03:06 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Tetrachloroethene (PCE)	0.810	0.400		µg/L	1	12/13/2021 11:03:06 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 11:03:06 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 11:03:06 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 11:03:06 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 11:03:06 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 11:03:06 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 11:03:06 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM

Client: PES Environmental, Inc.
Collection Date: 12/9/2021 1:00:00 PM
Project: MVSC
Lab ID: 2112190-013
Matrix: Groundwater
Client Sample ID: **DC-17-120921**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 11:03:06 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 11:03:06 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 11:03:06 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 11:03:06 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 11:03:06 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 11:03:06 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 11:03:06 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 11:03:06 PM
Surr: Dibromofluoromethane	102	80 - 120		%Rec	1	12/13/2021 11:03:06 PM
Surr: Toluene-d8	95.4	80 - 120		%Rec	1	12/13/2021 11:03:06 PM
Surr: 1-Bromo-4-fluorobenzene	94.4	80 - 120		%Rec	1	12/13/2021 11:03:06 PM

Client: PES Environmental, Inc.
Collection Date: 12/9/2021 2:45:00 PM
Project: MVSC
Lab ID: 2112190-014
Matrix: Groundwater
Client Sample ID: **KMW-3-120921**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 11:33:15 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 11:33:15 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 11:33:15 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 11:33:15 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 11:33:15 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 11:33:15 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 11:33:15 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 11:33:15 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 11:33:15 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 11:33:15 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 11:33:15 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 11:33:15 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 11:33:15 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 11:33:15 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 11:33:15 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Tetrachloroethene (PCE)	3.40	0.400		µg/L	1	12/13/2021 11:33:15 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 11:33:15 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 11:33:15 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 11:33:15 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 11:33:15 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 11:33:15 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 11:33:15 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM

Client: PES Environmental, Inc.
Collection Date: 12/9/2021 2:45:00 PM
Project: MVSC
Lab ID: 2112190-014
Matrix: Groundwater
Client Sample ID: **KMW-3-120921**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 11:33:15 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 11:33:15 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 11:33:15 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 11:33:15 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 11:33:15 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 11:33:15 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 11:33:15 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 11:33:15 PM
Surr: Dibromofluoromethane	103	80 - 120		%Rec	1	12/13/2021 11:33:15 PM
Surr: Toluene-d8	95.0	80 - 120		%Rec	1	12/13/2021 11:33:15 PM
Surr: 1-Bromo-4-fluorobenzene	93.3	80 - 120		%Rec	1	12/13/2021 11:33:15 PM

Client: PES Environmental, Inc.
Collection Date: 12/10/2021 11:10:00 AM
Project: MVSC
Lab ID: 2112190-015
Matrix: Groundwater
Client Sample ID: **KMW-8-121021**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/14/2021 12:03:21 AM
Chloromethane	ND	0.750		µg/L	1	12/14/2021 12:03:21 AM
Vinyl chloride	ND	0.200		µg/L	1	12/14/2021 12:03:21 AM
Bromomethane	ND	1.20		µg/L	1	12/14/2021 12:03:21 AM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Chloroethane	ND	1.00		µg/L	1	12/14/2021 12:03:21 AM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Acetone	ND	6.00		µg/L	1	12/14/2021 12:03:21 AM
Methylene chloride	ND	0.750		µg/L	1	12/14/2021 12:03:21 AM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/14/2021 12:03:21 AM
Chloroform	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/14/2021 12:03:21 AM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Carbon tetrachloride	ND	0.750		µg/L	1	12/14/2021 12:03:21 AM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/14/2021 12:03:21 AM
Benzene	ND	0.440		µg/L	1	12/14/2021 12:03:21 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Bromodichloromethane	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Dibromomethane	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Toluene	ND	0.750		µg/L	1	12/14/2021 12:03:21 AM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/14/2021 12:03:21 AM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/14/2021 12:03:21 AM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Tetrachloroethene (PCE)	1.94	0.400		µg/L	1	12/14/2021 12:03:21 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/14/2021 12:03:21 AM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/14/2021 12:03:21 AM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/14/2021 12:03:21 AM
Chlorobenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/14/2021 12:03:21 AM
Ethylbenzene	ND	0.400		µg/L	1	12/14/2021 12:03:21 AM
m,p-Xylene	ND	1.00		µg/L	1	12/14/2021 12:03:21 AM
o-Xylene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM

Client: PES Environmental, Inc.
Collection Date: 12/10/2021 11:10:00 AM
Project: MVSC
Lab ID: 2112190-015
Matrix: Groundwater
Client Sample ID: **KMW-8-121021**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 34731		Analyst: TN
Styrene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Isopropylbenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Bromoform	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/14/2021 12:03:21 AM
n-Propylbenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Bromobenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/14/2021 12:03:21 AM
2-Chlorotoluene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
4-Chlorotoluene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
tert-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/14/2021 12:03:21 AM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/14/2021 12:03:21 AM
sec-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
n-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/14/2021 12:03:21 AM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/14/2021 12:03:21 AM
Naphthalene	ND	1.25		µg/L	1	12/14/2021 12:03:21 AM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/14/2021 12:03:21 AM
Surr: Dibromofluoromethane	104	80 - 120		%Rec	1	12/14/2021 12:03:21 AM
Surr: Toluene-d8	95.4	80 - 120		%Rec	1	12/14/2021 12:03:21 AM
Surr: 1-Bromo-4-fluorobenzene	91.9	80 - 120		%Rec	1	12/14/2021 12:03:21 AM

Client: PES Environmental, Inc.
Collection Date: 12/10/2021 11:50:00 AM
Project: MVSC
Lab ID: 2112190-016
Matrix: Groundwater
Client Sample ID: **MW-18-121021**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/14/2021 12:33:30 AM
Chloromethane	ND	0.750		µg/L	1	12/14/2021 12:33:30 AM
Vinyl chloride	ND	0.200		µg/L	1	12/14/2021 12:33:30 AM
Bromomethane	ND	1.20		µg/L	1	12/14/2021 12:33:30 AM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Chloroethane	ND	1.00		µg/L	1	12/14/2021 12:33:30 AM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Acetone	ND	6.00		µg/L	1	12/14/2021 12:33:30 AM
Methylene chloride	ND	0.750		µg/L	1	12/14/2021 12:33:30 AM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/14/2021 12:33:30 AM
Chloroform	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/14/2021 12:33:30 AM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Carbon tetrachloride	ND	0.750		µg/L	1	12/14/2021 12:33:30 AM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/14/2021 12:33:30 AM
Benzene	ND	0.440		µg/L	1	12/14/2021 12:33:30 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Bromodichloromethane	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Dibromomethane	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Toluene	ND	0.750		µg/L	1	12/14/2021 12:33:30 AM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/14/2021 12:33:30 AM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/14/2021 12:33:30 AM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Tetrachloroethene (PCE)	9.78	0.400		µg/L	1	12/14/2021 12:33:30 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/14/2021 12:33:30 AM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/14/2021 12:33:30 AM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/14/2021 12:33:30 AM
Chlorobenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/14/2021 12:33:30 AM
Ethylbenzene	ND	0.400		µg/L	1	12/14/2021 12:33:30 AM
m,p-Xylene	ND	1.00		µg/L	1	12/14/2021 12:33:30 AM
o-Xylene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM

Client: PES Environmental, Inc.
Collection Date: 12/10/2021 11:50:00 AM
Project: MVSC
Lab ID: 2112190-016
Matrix: Groundwater
Client Sample ID: **MW-18-121021**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 34731		Analyst: TN
Styrene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Isopropylbenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Bromoform	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/14/2021 12:33:30 AM
n-Propylbenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Bromobenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/14/2021 12:33:30 AM
2-Chlorotoluene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
4-Chlorotoluene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
tert-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/14/2021 12:33:30 AM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/14/2021 12:33:30 AM
sec-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
n-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/14/2021 12:33:30 AM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/14/2021 12:33:30 AM
Naphthalene	ND	1.25		µg/L	1	12/14/2021 12:33:30 AM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/14/2021 12:33:30 AM
Surr: Dibromofluoromethane	103	80 - 120		%Rec	1	12/14/2021 12:33:30 AM
Surr: Toluene-d8	95.6	80 - 120		%Rec	1	12/14/2021 12:33:30 AM
Surr: 1-Bromo-4-fluorobenzene	93.7	80 - 120		%Rec	1	12/14/2021 12:33:30 AM

Client: PES Environmental, Inc.
Collection Date: 12/10/2021 12:40:00 PM
Project: MVSC
Lab ID: 2112190-017
Matrix: Groundwater
Client Sample ID: **KMW-7-121021**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/14/2021 1:03:36 AM
Chloromethane	ND	0.750		µg/L	1	12/14/2021 1:03:36 AM
Vinyl chloride	ND	0.200		µg/L	1	12/14/2021 1:03:36 AM
Bromomethane	ND	1.20		µg/L	1	12/14/2021 1:03:36 AM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Chloroethane	ND	1.00		µg/L	1	12/14/2021 1:03:36 AM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Acetone	ND	6.00		µg/L	1	12/14/2021 1:03:36 AM
Methylene chloride	ND	0.750		µg/L	1	12/14/2021 1:03:36 AM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/14/2021 1:03:36 AM
Chloroform	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/14/2021 1:03:36 AM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Carbon tetrachloride	ND	0.750		µg/L	1	12/14/2021 1:03:36 AM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/14/2021 1:03:36 AM
Benzene	ND	0.440		µg/L	1	12/14/2021 1:03:36 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Bromodichloromethane	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Dibromomethane	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Toluene	ND	0.750		µg/L	1	12/14/2021 1:03:36 AM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/14/2021 1:03:36 AM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/14/2021 1:03:36 AM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Tetrachloroethene (PCE)	0.624	0.400		µg/L	1	12/14/2021 1:03:36 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/14/2021 1:03:36 AM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/14/2021 1:03:36 AM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/14/2021 1:03:36 AM
Chlorobenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/14/2021 1:03:36 AM
Ethylbenzene	ND	0.400		µg/L	1	12/14/2021 1:03:36 AM
m,p-Xylene	ND	1.00		µg/L	1	12/14/2021 1:03:36 AM
o-Xylene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM

Client: PES Environmental, Inc.
Collection Date: 12/10/2021 12:40:00 PM
Project: MVSC
Lab ID: 2112190-017
Matrix: Groundwater
Client Sample ID: **KMW-7-121021**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D			Batch ID: 34731		Analyst: TN	
Styrene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Isopropylbenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Bromoform	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/14/2021 1:03:36 AM
n-Propylbenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Bromobenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/14/2021 1:03:36 AM
2-Chlorotoluene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
4-Chlorotoluene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
tert-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/14/2021 1:03:36 AM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/14/2021 1:03:36 AM
sec-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
n-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/14/2021 1:03:36 AM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/14/2021 1:03:36 AM
Naphthalene	ND	1.25		µg/L	1	12/14/2021 1:03:36 AM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/14/2021 1:03:36 AM
Surr: Dibromofluoromethane	104	80 - 120		%Rec	1	12/14/2021 1:03:36 AM
Surr: Toluene-d8	95.3	80 - 120		%Rec	1	12/14/2021 1:03:36 AM
Surr: 1-Bromo-4-fluorobenzene	92.3	80 - 120		%Rec	1	12/14/2021 1:03:36 AM

Client: PES Environmental, Inc.
Collection Date: 12/10/2021 1:30:00 PM
Project: MVSC
Lab ID: 2112190-018
Matrix: Groundwater
Client Sample ID: **MW-17-121021**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/14/2021 1:33:43 AM
Chloromethane	ND	0.750		µg/L	1	12/14/2021 1:33:43 AM
Vinyl chloride	ND	0.200		µg/L	1	12/14/2021 1:33:43 AM
Bromomethane	ND	1.20		µg/L	1	12/14/2021 1:33:43 AM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Chloroethane	ND	1.00		µg/L	1	12/14/2021 1:33:43 AM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Acetone	ND	6.00		µg/L	1	12/14/2021 1:33:43 AM
Methylene chloride	ND	0.750		µg/L	1	12/14/2021 1:33:43 AM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/14/2021 1:33:43 AM
Chloroform	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/14/2021 1:33:43 AM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Carbon tetrachloride	ND	0.750		µg/L	1	12/14/2021 1:33:43 AM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/14/2021 1:33:43 AM
Benzene	ND	0.440		µg/L	1	12/14/2021 1:33:43 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Bromodichloromethane	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Dibromomethane	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Toluene	ND	0.750		µg/L	1	12/14/2021 1:33:43 AM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/14/2021 1:33:43 AM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/14/2021 1:33:43 AM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Tetrachloroethene (PCE)	4.98	0.400		µg/L	1	12/14/2021 1:33:43 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/14/2021 1:33:43 AM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/14/2021 1:33:43 AM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/14/2021 1:33:43 AM
Chlorobenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/14/2021 1:33:43 AM
Ethylbenzene	ND	0.400		µg/L	1	12/14/2021 1:33:43 AM
m,p-Xylene	ND	1.00		µg/L	1	12/14/2021 1:33:43 AM
o-Xylene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM

Client: PES Environmental, Inc.
Collection Date: 12/10/2021 1:30:00 PM
Project: MVSC
Lab ID: 2112190-018
Matrix: Groundwater
Client Sample ID: **MW-17-121021**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Isopropylbenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Bromoform	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/14/2021 1:33:43 AM
n-Propylbenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Bromobenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/14/2021 1:33:43 AM
2-Chlorotoluene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
4-Chlorotoluene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
tert-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/14/2021 1:33:43 AM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/14/2021 1:33:43 AM
sec-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
n-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/14/2021 1:33:43 AM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/14/2021 1:33:43 AM
Naphthalene	ND	1.25		µg/L	1	12/14/2021 1:33:43 AM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/14/2021 1:33:43 AM
Surr: Dibromofluoromethane	106	80 - 120		%Rec	1	12/14/2021 1:33:43 AM
Surr: Toluene-d8	96.6	80 - 120		%Rec	1	12/14/2021 1:33:43 AM
Surr: 1-Bromo-4-fluorobenzene	93.2	80 - 120		%Rec	1	12/14/2021 1:33:43 AM

Client: PES Environmental, Inc.
Collection Date: 12/10/2021 2:30:00 PM
Project: MVSC
Lab ID: 2112190-019
Matrix: Groundwater
Client Sample ID: **W-Drum4-121021**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/14/2021 2:03:48 AM
Chloromethane	ND	0.750		µg/L	1	12/14/2021 2:03:48 AM
Vinyl chloride	ND	0.200		µg/L	1	12/14/2021 2:03:48 AM
Bromomethane	ND	1.20		µg/L	1	12/14/2021 2:03:48 AM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Chloroethane	ND	1.00		µg/L	1	12/14/2021 2:03:48 AM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Acetone	8.14	6.00		µg/L	1	12/14/2021 2:03:48 AM
Methylene chloride	ND	0.750		µg/L	1	12/14/2021 2:03:48 AM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/14/2021 2:03:48 AM
Chloroform	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/14/2021 2:03:48 AM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Carbon tetrachloride	ND	0.750		µg/L	1	12/14/2021 2:03:48 AM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/14/2021 2:03:48 AM
Benzene	ND	0.440		µg/L	1	12/14/2021 2:03:48 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Bromodichloromethane	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Dibromomethane	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Toluene	ND	0.750		µg/L	1	12/14/2021 2:03:48 AM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/14/2021 2:03:48 AM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/14/2021 2:03:48 AM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Tetrachloroethene (PCE)	1.88	0.400		µg/L	1	12/14/2021 2:03:48 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/14/2021 2:03:48 AM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/14/2021 2:03:48 AM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/14/2021 2:03:48 AM
Chlorobenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/14/2021 2:03:48 AM
Ethylbenzene	ND	0.400		µg/L	1	12/14/2021 2:03:48 AM
m,p-Xylene	ND	1.00		µg/L	1	12/14/2021 2:03:48 AM
o-Xylene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM

Client: PES Environmental, Inc.
Collection Date: 12/10/2021 2:30:00 PM
Project: MVSC
Lab ID: 2112190-019
Matrix: Groundwater
Client Sample ID: **W-Drum4-121021**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Styrene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Isopropylbenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Bromoform	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/14/2021 2:03:48 AM
n-Propylbenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Bromobenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/14/2021 2:03:48 AM
2-Chlorotoluene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
4-Chlorotoluene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
tert-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/14/2021 2:03:48 AM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/14/2021 2:03:48 AM
sec-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
n-Butylbenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/14/2021 2:03:48 AM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/14/2021 2:03:48 AM
Naphthalene	ND	1.25		µg/L	1	12/14/2021 2:03:48 AM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/14/2021 2:03:48 AM
Surr: Dibromofluoromethane	104	80 - 120		%Rec	1	12/14/2021 2:03:48 AM
Surr: Toluene-d8	93.4	80 - 120		%Rec	1	12/14/2021 2:03:48 AM
Surr: 1-Bromo-4-fluorobenzene	94.5	80 - 120		%Rec	1	12/14/2021 2:03:48 AM

Client: PES Environmental, Inc.
Collection Date: 12/3/2021 1:55:00 PM
Project: MVSC
Lab ID: 2112190-020
Matrix: Groundwater
Client Sample ID: **TB-121021**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.25		µg/L	1	12/13/2021 2:30:57 PM
Chloromethane	ND	0.750		µg/L	1	12/13/2021 2:30:57 PM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2021 2:30:57 PM
Bromomethane	ND	1.20		µg/L	1	12/13/2021 2:30:57 PM
Trichlorofluoromethane (CFC-11)	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Chloroethane	ND	1.00		µg/L	1	12/13/2021 2:30:57 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Acetone	ND	6.00		µg/L	1	12/13/2021 2:30:57 PM
Methylene chloride	ND	0.750		µg/L	1	12/13/2021 2:30:57 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Methyl tert-butyl ether (MTBE)	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,1-Dichloroethane	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
cis-1,2-Dichloroethene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
2-Butanone (MEK)	ND	1.50		µg/L	1	12/13/2021 2:30:57 PM
Chloroform	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,1,1-Trichloroethane (TCA)	ND	0.400		µg/L	1	12/13/2021 2:30:57 PM
1,1-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Carbon tetrachloride	ND	0.750		µg/L	1	12/13/2021 2:30:57 PM
1,2-Dichloroethane (EDC)	ND	0.400		µg/L	1	12/13/2021 2:30:57 PM
Benzene	ND	0.440		µg/L	1	12/13/2021 2:30:57 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,2-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Bromodichloromethane	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Dibromomethane	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Toluene	ND	0.750		µg/L	1	12/13/2021 2:30:57 PM
trans-1,3-Dichloropropylene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Methyl Isobutyl Ketone (MIBK)	ND	1.25		µg/L	1	12/13/2021 2:30:57 PM
1,1,2-Trichloroethane	ND	0.350		µg/L	1	12/13/2021 2:30:57 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Tetrachloroethene (PCE)	ND	0.400		µg/L	1	12/13/2021 2:30:57 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2021 2:30:57 PM
1,2-Dibromoethane (EDB)	ND	0.300		µg/L	1	12/13/2021 2:30:57 PM
2-Hexanone (MBK)	ND	1.00		µg/L	1	12/13/2021 2:30:57 PM
Chlorobenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,1,1,2-Tetrachloroethane	ND	0.300		µg/L	1	12/13/2021 2:30:57 PM
Ethylbenzene	ND	0.400		µg/L	1	12/13/2021 2:30:57 PM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2021 2:30:57 PM
o-Xylene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM

Client: PES Environmental, Inc.
Collection Date: 12/3/2021 1:55:00 PM
Project: MVSC
Lab ID: 2112190-020
Matrix: Groundwater
Client Sample ID: **TB-121021**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 34731		Analyst: TN
Styrene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Isopropylbenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Bromoform	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,1,2,2-Tetrachloroethane	ND	0.400		µg/L	1	12/13/2021 2:30:57 PM
n-Propylbenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Bromobenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,3,5-Trimethylbenzene	ND	0.250		µg/L	1	12/13/2021 2:30:57 PM
2-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
4-Chlorotoluene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
tert-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,2,3-Trichloropropane	ND	0.400		µg/L	1	12/13/2021 2:30:57 PM
1,2,4-Trichlorobenzene	ND	0.750		µg/L	1	12/13/2021 2:30:57 PM
sec-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,4-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
n-Butylbenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,2-Dichlorobenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2021 2:30:57 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Hexachloro-1,3-butadiene	ND	0.500		µg/L	1	12/13/2021 2:30:57 PM
Naphthalene	ND	1.25		µg/L	1	12/13/2021 2:30:57 PM
1,2,3-Trichlorobenzene	ND	0.700		µg/L	1	12/13/2021 2:30:57 PM
Surr: Dibromofluoromethane	101	80 - 120		%Rec	1	12/13/2021 2:30:57 PM
Surr: Toluene-d8	94.6	80 - 120		%Rec	1	12/13/2021 2:30:57 PM
Surr: 1-Bromo-4-fluorobenzene	92.2	80 - 120		%Rec	1	12/13/2021 2:30:57 PM

Work Order: 2112190
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-34731** SampType: **LCS** Units: **µg/L** Prep Date: **12/13/2021** RunNo: **71932**
Client ID: **LCSW** Batch ID: **34731** Analysis Date: **12/13/2021** SeqNo: **1467557**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	23.2	1.25	20.00	0	116	80	120				
Chloromethane	22.6	0.750	20.00	0	113	80	120				
Vinyl chloride	21.9	0.200	20.00	0	110	80	120				
Bromomethane	21.5	1.20	20.00	0	108	80	120				
Trichlorofluoromethane (CFC-11)	20.6	0.500	20.00	0	103	80	120				
Chloroethane	21.8	1.00	20.00	0	109	80	120				
1,1-Dichloroethene	21.9	0.500	20.00	0	109	80	120				
Acetone	62.9	6.00	50.00	0	126	80	120				S
Methylene chloride	21.2	0.750	20.00	0	106	80	120				
trans-1,2-Dichloroethene	22.6	0.500	20.00	0	113	80	120				
Methyl tert-butyl ether (MTBE)	24.2	0.500	20.00	0	121	80	120				S
1,1-Dichloroethane	22.0	0.500	20.00	0	110	80	120				
cis-1,2-Dichloroethene	22.3	0.500	20.00	0	112	80	120				
2-Butanone (MEK)	64.5	1.50	50.00	0	129	80	120				S
Chloroform	22.1	0.500	20.00	0	111	80	120				
1,1,1-Trichloroethane (TCA)	22.5	0.400	20.00	0	112	80	120				
1,1-Dichloropropene	22.0	0.500	20.00	0	110	80	120				
Carbon tetrachloride	22.0	0.750	20.00	0	110	80	120				
1,2-Dichloroethane (EDC)	22.3	0.400	20.00	0	112	80	120				
Benzene	22.5	0.440	20.00	0	112	80	120				
Trichloroethene (TCE)	22.4	0.500	20.00	0	112	80	120				
1,2-Dichloropropane	22.2	0.500	20.00	0	111	80	120				
Bromodichloromethane	22.4	0.500	20.00	0	112	80	120				
Dibromomethane	23.2	0.500	20.00	0	116	80	120				
cis-1,3-Dichloropropene	22.3	0.500	20.00	0	111	80	120				
Toluene	22.3	0.750	20.00	0	112	80	120				
trans-1,3-Dichloropropylene	22.6	0.500	20.00	0	113	80	120				
Methyl Isobutyl Ketone (MIBK)	59.8	1.25	50.00	0	120	80	120				
1,1,2-Trichloroethane	23.9	0.350	20.00	0	119	80	120				
1,3-Dichloropropane	23.3	0.500	20.00	0	117	80	120				

Work Order: 2112190
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-34731** SampType: **LCS** Units: **µg/L** Prep Date: **12/13/2021** RunNo: **71932**
Client ID: **LCSW** Batch ID: **34731** Analysis Date: **12/13/2021** SeqNo: **1467557**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene (PCE)	23.5	0.400	20.00	0	118	80	120				
Dibromochloromethane	23.4	1.00	20.00	0	117	80	120				
1,2-Dibromoethane (EDB)	23.5	0.300	20.00	0	117	80	120				
2-Hexanone (MBK)	60.3	1.00	50.00	0	121	80	120				S
Chlorobenzene	22.8	0.500	20.00	0	114	80	120				
1,1,1,2-Tetrachloroethane	23.3	0.300	20.00	0	116	80	120				
Ethylbenzene	22.7	0.400	20.00	0	114	80	120				
m,p-Xylene	46.4	1.00	40.00	0	116	80	120				
o-Xylene	22.9	0.500	20.00	0	114	80	120				
Styrene	23.0	0.500	20.00	0	115	80	120				
Isopropylbenzene	23.1	0.500	20.00	0	115	80	120				
Bromoform	24.5	0.500	20.00	0	122	80	120				S
1,1,2,2-Tetrachloroethane	23.9	0.400	20.00	0	120	80	120				
n-Propylbenzene	23.1	0.500	20.00	0	115	80	120				
Bromobenzene	23.7	0.500	20.00	0	118	80	120				
1,3,5-Trimethylbenzene	22.7	0.250	20.00	0	113	80	120				
2-Chlorotoluene	23.0	0.500	20.00	0	115	80	120				
4-Chlorotoluene	22.9	0.500	20.00	0	114	80	120				
tert-Butylbenzene	23.1	0.500	20.00	0	116	80	120				
1,2,3-Trichloropropane	23.4	0.400	20.00	0	117	80	120				
1,2,4-Trichlorobenzene	23.0	0.750	20.00	0	115	80	120				
sec-Butylbenzene	23.3	0.500	20.00	0	117	80	120				
4-Isopropyltoluene	23.5	0.500	20.00	0	118	80	120				
1,3-Dichlorobenzene	22.7	0.500	20.00	0	113	80	120				
1,4-Dichlorobenzene	23.0	0.500	20.00	0	115	80	120				
n-Butylbenzene	22.8	0.500	20.00	0	114	80	120				
1,2-Dichlorobenzene	23.0	0.500	20.00	0	115	80	120				
1,2-Dibromo-3-chloropropane	23.8	1.00	20.00	0	119	80	120				
1,2,4-Trimethylbenzene	22.7	0.500	20.00	0	113	80	120				
Hexachloro-1,3-butadiene	25.0	0.500	20.00	0	125	80	120				S

Work Order: 2112190
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-34731**	SampType: **LCS**	Units: **µg/L**	Prep Date: **12/13/2021**	RunNo: **71932**
Client ID: **LCSW**	Batch ID: **34731**		Analysis Date: **12/13/2021**	SeqNo: **1467557**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	22.5	1.25	20.00	0	113	80	120				
1,2,3-Trichlorobenzene	23.3	0.700	20.00	0	117	80	120				
Surr: Dibromofluoromethane	24.4		25.00		97.5	80	120				
Surr: Toluene-d8	24.6		25.00		98.4	80	120				
Surr: 1-Bromo-4-fluorobenzene	26.0		25.00		104	80	120				

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect; result meets QC requirements.

Sample ID: **MB-34731**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **12/13/2021**	RunNo: **71932**
Client ID: **MBLKW**	Batch ID: **34731**		Analysis Date: **12/13/2021**	SeqNo: **1467556**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.25									
Chloromethane	ND	0.750									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.20									
Trichlorofluoromethane (CFC-11)	ND	0.500									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	0.500									
Acetone	ND	6.00									
Methylene chloride	ND	0.750									
trans-1,2-Dichloroethene	ND	0.500									
Methyl tert-butyl ether (MTBE)	ND	0.500									
1,1-Dichloroethane	ND	0.500									
cis-1,2-Dichloroethene	ND	0.500									
2-Butanone (MEK)	ND	1.50									
Chloroform	ND	0.500									
1,1,1-Trichloroethane (TCA)	ND	0.400									
1,1-Dichloropropene	ND	0.500									
Carbon tetrachloride	ND	0.750									
1,2-Dichloroethane (EDC)	ND	0.400									

Work Order: 2112190
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-34731** SampType: **MBLK** Units: **µg/L** Prep Date: **12/13/2021** RunNo: **71932**
Client ID: **MBLKW** Batch ID: **34731** Analysis Date: **12/13/2021** SeqNo: **1467556**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.440									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	0.500									
Bromodichloromethane	ND	0.500									
Dibromomethane	ND	0.500									
cis-1,3-Dichloropropene	ND	0.500									
Toluene	ND	0.750									
trans-1,3-Dichloropropylene	ND	0.500									
Methyl Isobutyl Ketone (MIBK)	ND	1.25									
1,1,2-Trichloroethane	ND	0.350									
1,3-Dichloropropane	ND	0.500									
Tetrachloroethene (PCE)	ND	0.400									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.300									
2-Hexanone (MBK)	ND	1.00									
Chlorobenzene	ND	0.500									
1,1,1,2-Tetrachloroethane	ND	0.300									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	1.00									
o-Xylene	ND	0.500									
Styrene	ND	0.500									
Isopropylbenzene	ND	0.500									
Bromoform	ND	0.500									
1,1,2,2-Tetrachloroethane	ND	0.400									
n-Propylbenzene	ND	0.500									
Bromobenzene	ND	0.500									
1,3,5-Trimethylbenzene	ND	0.250									
2-Chlorotoluene	ND	0.500									
4-Chlorotoluene	ND	0.500									
tert-Butylbenzene	ND	0.500									

Work Order: 2112190
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-34731** SampType: **MBLK** Units: **µg/L** Prep Date: **12/13/2021** RunNo: **71932**
Client ID: **MBLKW** Batch ID: **34731** Analysis Date: **12/13/2021** SeqNo: **1467556**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	ND	0.400									
1,2,4-Trichlorobenzene	ND	0.750									
sec-Butylbenzene	ND	0.500									
4-Isopropyltoluene	ND	0.500									
1,3-Dichlorobenzene	ND	0.500									
1,4-Dichlorobenzene	ND	0.500									
n-Butylbenzene	ND	0.500									
1,2-Dichlorobenzene	ND	0.500									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	0.500									
Hexachloro-1,3-butadiene	ND	0.500									
Naphthalene	ND	1.25									
1,2,3-Trichlorobenzene	ND	0.700									
Surr: Dibromofluoromethane	25.9		25.00		104	80	120				
Surr: Toluene-d8	23.5		25.00		93.9	80	120				
Surr: 1-Bromo-4-fluorobenzene	22.9		25.00		91.6	80	120				

Sample ID: **2112190-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **12/13/2021** RunNo: **71932**
Client ID: **MW-4-120721** Batch ID: **34731** Analysis Date: **12/13/2021** SeqNo: **1467532**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.25						0		30	
Chloromethane	ND	0.750						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.20						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.500						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	0.500						0		30	
Acetone	ND	6.00						0		30	
Methylene chloride	ND	0.750						0		30	

Work Order: 2112190
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2112190-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **12/13/2021** RunNo: **71932**
Client ID: **MW-4-120721** Batch ID: **34731** Analysis Date: **12/13/2021** SeqNo: **1467532**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	ND	0.500						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.500						0		30	
1,1-Dichloroethane	ND	0.500						0		30	
cis-1,2-Dichloroethene	ND	0.500						0		30	
2-Butanone (MEK)	ND	1.50						0		30	
Chloroform	ND	0.500						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.400						0		30	
1,1-Dichloropropene	ND	0.500						0		30	
Carbon tetrachloride	ND	0.750						0		30	
1,2-Dichloroethane (EDC)	ND	0.400						0		30	
Benzene	ND	0.440						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	0.500						0		30	
Bromodichloromethane	ND	0.500						0		30	
Dibromomethane	ND	0.500						0		30	
cis-1,3-Dichloropropene	ND	0.500						0		30	
Toluene	ND	0.750						0		30	
trans-1,3-Dichloropropylene	ND	0.500						0		30	
Methyl Isobutyl Ketone (MIBK)	ND	1.25						0		30	
1,1,2-Trichloroethane	ND	0.350						0		30	
1,3-Dichloropropane	ND	0.500						0		30	
Tetrachloroethene (PCE)	2.52	0.400						2.623	4.18	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.300						0		30	
2-Hexanone (MBK)	ND	1.00						0		30	
Chlorobenzene	ND	0.500						0		30	
1,1,1,2-Tetrachloroethane	ND	0.300						0		30	
Ethylbenzene	ND	0.400						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	0.500						0		30	

Work Order: 2112190
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2112190-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **12/13/2021** RunNo: **71932**
Client ID: **MW-4-120721** Batch ID: **34731** Analysis Date: **12/13/2021** SeqNo: **1467532**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	ND	0.500						0		30	
Isopropylbenzene	ND	0.500						0		30	
Bromoform	ND	0.500						0		30	
1,1,2,2-Tetrachloroethane	ND	0.400						0		30	
n-Propylbenzene	ND	0.500						0		30	
Bromobenzene	ND	0.500						0		30	
1,3,5-Trimethylbenzene	ND	0.250						0		30	
2-Chlorotoluene	ND	0.500						0		30	
4-Chlorotoluene	ND	0.500						0		30	
tert-Butylbenzene	ND	0.500						0		30	
1,2,3-Trichloropropane	ND	0.400						0		30	
1,2,4-Trichlorobenzene	ND	0.750						0		30	
sec-Butylbenzene	ND	0.500						0		30	
4-Isopropyltoluene	ND	0.500						0		30	
1,3-Dichlorobenzene	ND	0.500						0		30	
1,4-Dichlorobenzene	ND	0.500						0		30	
n-Butylbenzene	ND	0.500						0		30	
1,2-Dichlorobenzene	ND	0.500						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	0.500						0		30	
Hexachloro-1,3-butadiene	ND	0.500						0		30	
Naphthalene	ND	1.25						0		30	
1,2,3-Trichlorobenzene	ND	0.700						0		30	
Surr: Dibromofluoromethane	25.7		25.00		103	80	120		0		
Surr: Toluene-d8	23.7		25.00		94.8	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	23.1		25.00		92.4	80	120		0		

Work Order: 2112190
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2112190-009AMS** SampType: **MS** Units: **µg/L** Prep Date: **12/13/2021** RunNo: **71932**
Client ID: **MW-100-120821** Batch ID: **34731** Analysis Date: **12/13/2021** SeqNo: **1467541**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	13.6	1.25	20.00	0	67.9	6.06	158				
Chloromethane	13.9	0.750	20.00	0	69.7	8.94	177				
Vinyl chloride	14.7	0.200	20.00	0	73.3	32.8	161				
Bromomethane	14.3	1.20	20.00	0	71.3	24.1	196				
Trichlorofluoromethane (CFC-11)	15.2	0.500	20.00	0	76.1	64.9	138				
Chloroethane	14.5	1.00	20.00	0	72.7	62.2	137				
1,1-Dichloroethene	15.5	0.500	20.00	0	77.5	76.5	134				
Acetone	43.1	6.00	50.00	0	86.2	56.8	147				
Methylene chloride	14.9	0.750	20.00	0	74.7	75.7	128				S
trans-1,2-Dichloroethene	15.7	0.500	20.00	0	78.7	80.1	129				S
Methyl tert-butyl ether (MTBE)	16.0	0.500	20.00	0	80.1	59.5	138				
1,1-Dichloroethane	15.3	0.500	20.00	0	76.4	78.1	131				S
cis-1,2-Dichloroethene	15.8	0.500	20.00	0	79.1	81.5	126				S
2-Butanone (MEK)	42.5	1.50	50.00	0	85.0	60.4	134				
Chloroform	15.8	0.500	20.00	0.2273	78.0	81.2	126				S
1,1,1-Trichloroethane (TCA)	16.0	0.400	20.00	0	80.2	83.7	126				S
1,1-Dichloropropene	15.5	0.500	20.00	0	77.4	79.9	131				S
Carbon tetrachloride	16.1	0.750	20.00	0	80.3	82.3	127				S
1,2-Dichloroethane (EDC)	15.3	0.400	20.00	0	76.6	76.3	123				
Benzene	15.6	0.440	20.00	0	78.1	80.1	128				S
Trichloroethene (TCE)	15.8	0.500	20.00	0	79.1	78.4	128				
1,2-Dichloropropane	15.0	0.500	20.00	0	75.2	77	129				S
Bromodichloromethane	15.4	0.500	20.00	0	77.2	80.1	122				S
Dibromomethane	16.2	0.500	20.00	0	81.1	79	123				
cis-1,3-Dichloropropene	14.6	0.500	20.00	0	73.1	76.2	120				S
Toluene	15.7	0.750	20.00	0	78.4	83.3	125				S
trans-1,3-Dichloropropylene	14.8	0.500	20.00	0	74.2	72.9	122				
Methyl Isobutyl Ketone (MIBK)	39.2	1.25	50.00	0	78.4	59.9	136				
1,1,2-Trichloroethane	16.7	0.350	20.00	0	83.5	77.9	124				
1,3-Dichloropropane	16.2	0.500	20.00	0	80.9	75.6	125				

Work Order: 2112190
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2112190-009AMS** SampType: **MS** Units: **µg/L** Prep Date: **12/13/2021** RunNo: **71932**
Client ID: **MW-100-120821** Batch ID: **34731** Analysis Date: **12/13/2021** SeqNo: **1467541**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene (PCE)	26.2	0.400	20.00	10.37	79.2	85.7	124				S
Dibromochloromethane	16.3	1.00	20.00	0	81.3	75.8	122				
1,2-Dibromoethane (EDB)	16.6	0.300	20.00	0	82.9	75.5	124				
2-Hexanone (MBK)	40.0	1.00	50.00	0	79.9	62.3	131				
Chlorobenzene	16.2	0.500	20.00	0	81.1	87.7	118				S
1,1,1,2-Tetrachloroethane	16.3	0.300	20.00	0	81.4	81.1	122				
Ethylbenzene	15.9	0.400	20.00	0	79.3	85.5	124				S
m,p-Xylene	32.5	1.00	40.00	0	81.2	86.8	122				S
o-Xylene	15.8	0.500	20.00	0	78.9	86.4	121				S
Styrene	15.7	0.500	20.00	0	78.7	79.7	123				S
Isopropylbenzene	16.0	0.500	20.00	0	80.2	85.3	125				S
Bromoform	16.9	0.500	20.00	0	84.7	65.6	132				
1,1,2,2-Tetrachloroethane	17.4	0.400	20.00	0	86.8	71.6	133				
n-Propylbenzene	16.1	0.500	20.00	0	80.6	79.6	128				
Bromobenzene	16.4	0.500	20.00	0	82.2	84	120				S
1,3,5-Trimethylbenzene	15.9	0.250	20.00	0	79.3	82.9	124				S
2-Chlorotoluene	15.9	0.500	20.00	0	79.4	84.6	123				S
4-Chlorotoluene	16.0	0.500	20.00	0	80.1	81.1	124				S
tert-Butylbenzene	16.1	0.500	20.00	0	80.7	84.2	126				S
1,2,3-Trichloropropane	16.2	0.400	20.00	0	80.9	67.3	125				
1,2,4-Trichlorobenzene	15.9	0.750	20.00	0	79.3	59.1	132				
sec-Butylbenzene	16.2	0.500	20.00	0	81.2	81.8	127				S
4-Isopropyltoluene	16.4	0.500	20.00	0	82.0	80.1	127				
1,3-Dichlorobenzene	16.7	0.500	20.00	0	83.7	84.7	121				S
1,4-Dichlorobenzene	16.6	0.500	20.00	0	82.9	84.9	119				S
n-Butylbenzene	16.3	0.500	20.00	0	81.6	76.8	129				
1,2-Dichlorobenzene	16.7	0.500	20.00	0	83.3	84.9	120				S
1,2-Dibromo-3-chloropropane	17.2	1.00	20.00	0	85.9	53.4	138				
1,2,4-Trimethylbenzene	15.9	0.500	20.00	0	79.3	81.8	124				S
Hexachloro-1,3-butadiene	18.7	0.500	20.00	0	93.5	71.1	131				

Work Order: 2112190
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2112190-009AMS** SampType: **MS** Units: **µg/L** Prep Date: **12/13/2021** RunNo: **71932**
Client ID: **MW-100-120821** Batch ID: **34731** Analysis Date: **12/13/2021** SeqNo: **1467541**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	15.3	1.25	20.00	0	76.6	42.6	147				
1,2,3-Trichlorobenzene	16.6	0.700	20.00	0	83.1	39.3	147				
Surr: Dibromofluoromethane	24.7		25.00		98.6	80	120				
Surr: Toluene-d8	24.6		25.00		98.6	80	120				
Surr: 1-Bromo-4-fluorobenzene	25.6		25.00		102	80	120				

NOTES:
S - Outlying spike recovery(ies) observed.

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**2112190**
Logged by:	**Clare Griggs**	Date Received:	**12/10/2021 4:55:00 PM**

Chain of Custody

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

Log In

3.	Coolers are present?	Yes	☑	No ☐	NA	☐
4.	Shipping container/cooler in good condition?	Yes	☑	No ☐		
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes	☑	No ☐	Not Present	☐
6.	Was an attempt made to cool the samples?	Yes	☑	No ☐	NA	☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes	☑	No ☐	NA	☐
8.	Sample(s) in proper container(s)?	Yes	☑	No ☐		
9.	Sufficient sample volume for indicated test(s)?	Yes	☑	No ☐		
10.	Are samples properly preserved?	Yes	☑	No ☐		
11.	Was preservative added to bottles?	Yes	☐	No ☑	NA	☐
12.	Is there headspace in the VOA vials?	Yes	☑	No ☐	NA	☐
13.	Did all samples containers arrive in good condition(unbroken)?	Yes	☑	No ☐		
14.	Does paperwork match bottle labels?	Yes	☑	No ☐		
15.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No ☐		
16.	Is it clear what analyses were requested?	Yes	☑	No ☐		
17.	Were all holding times able to be met?	Yes	☑	No ☐		

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Headspace present in two of the W-Drum sample VOAs.

Item Information

Item #	Temp ºC
Sample	0.8

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

Chain of Custody Record & Laboratory Services Agreement

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

Date: 12/7-10/21 | Page: 1 of: 2 | Laboratory Project No (internal): 2112190

Project Name: MVSC | Special Remarks:

Project No: 443019-1358.001.02-013

Client: PES Environmental

Address: 2101 4th Ave #1310

Collected by: Sean Kaunovsky

City, State, Zip: Seattle, WA, 98121

Location: Normandy Park, WA

Telephone: 206-529-3980

Report To (PM): Matt ~~Dao~~ Dahl | Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax: 206-529-3985

PM Email: matt.dah.@nivS.com

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	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-4-120721	12/7/21	1250	GW	3	X											
2	MW-7-120721		1620		3	X											
3	DC-4-120721		1415		3	X											
4	MW-20-120821	12/8/21	0900		3	X											
5	DC-15-120821		1000		3	X											
6	DC-8-120821		1115		3	X											
7	DC-7-120821		1415		3	X											
8	EQ-120821		1445		3	X											
9	MW-100-120821		1530		3	X											
10	MW-9-120921	12/9/21	0845		3	X											

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

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

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

Turn-around Time:
☒ Standard ☐ Next Day
☐ 3 Day ☐ Same Day
☐ 2 Day (specify)

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

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x	Sean Kaunovsky	12/10/21 @1530	x	Alex Trejo	12/10/21 16:55
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

Chain of Custody Record & Laboratory Services Agreement

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

Date: 12/7-10/21 Page: 2 of: 2

Laboratory Project No (internal): 2112190

Project Name: MVSC

Special Remarks:

Client: PES Environmental

Project No: /

Address: /

Collected by: /

City, State, Zip: See pg. 1

Location: See pg. 1

Telephone: /

Report To (PM): /

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email:

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	# of Cont.	VOCs (EPA 8260 / 624)	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-10-120921	12/9/21	1010	GW	3	X												
2	MW-11-120921		1135		3	X												
3	DC-17-120921		1300		3	X												
4	KMW-3-120921		1445		3	X												
5	KMW-8-121021	12/10/21	1110		3	X												
6	MW-18-121021		1150		3	X												
7	KMW-7-121021		1240		3	X												
8	MW-17-121021		1330		3	X												
9	W-Drum4-121021		1430		3	X												
10	TB-121021		—	—	1	X												

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

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

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

Turn-around Time:
☒ Standard ☐ Next Day
☐ 3 Day ☐ Same Day
☐ 2 Day (specify)

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

Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x	Sean Kounovsky	12/10/21 @ 1530	x Alex Trejo	Alex Trejo	12/10/21 16:55
Relinquished (Signature)	Print Name	Date/Time	Received (Signature)	Print Name	Date/Time
x			x		

MEMORANDUM

TO: Project File **DATE:** February 10, 2022

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center

PROJECT #: 443019-1358001.02.013

TASK: EIM Data Validation Level EPA2A – May and December 2021, Groundwater Samples

LAB: Fremont Work Order Numbers: 2105151 and 2112190

One groundwater sample and a trip blank were collected on May 11th, 2021. Sixteen groundwater samples (including a field duplicate), one waste drum sample, one equipment blank, and a trip blank were collected December 7-10, 2021. Groundwater samples were collected as part of an ongoing Phase II Investigation at the Manhattan Village Shopping Centre site in Normandy Park, Washington. Laboratory analytical services were provided by Fremont Analytical of Seattle Washington. Samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260D.

The quality assurance review of the laboratory data for Work Orders 2105151 and 2112190 are summarized below.

DATA QUALIFICATIONS

Guidelines established by USEPA for a limited data validation review of analytical data were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2020).

DATA VALIDATION

Completeness

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

Sample Collection and Preservation

The samples were stored on ice in coolers and delivered in good condition to the laboratory. Sample temperatures at the time of receipt were slightly below EPA's recommended temperature

preservation range of less than 6.0 °Centigrade. No data qualifications are warranted with the following discussion:

- Work Order 2112190: Review of Fremont's Sample Log-In Checklist indicates that headspace was present in both VOC vials for sample W-Drum-121021. No action is taken other than to note this.

Holding Times

USEPA Method 8260D:
All samples were analyzed for VOCs within the EPA recommended holding time of 14 days for preserved water. 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. Fremont did not indicate any issues with initial or continuing calibration verification (CCV) criteria.

Method Blank Results

USEPA Method 8260D:
Laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reporting limits (RLs).

Trip Blank Results

Two trip blanks (TB-051121 and TB-121021) were collected and one trip blank (TB-051121) was placed on hold. The target analytes (VOCs) were not detected in the trip blank (TB-121021) at or above the RLs.

Equipment Blank Results

An equipment blank (EQ-120821) was collected. The target analytes (VOCs) were not detected in the equipment blank at or above the RLs.

Field Duplicate Analyses

One field duplicate pair (DC-7-120821 and MW-100-120821) was collected. Field duplicate results are comparable and relative percent differences (RPDs) for VOCs are within project requirements of 30% RPD.

Laboratory Duplicate Analyses

USEPA Method 8260D:
Laboratory duplicate analysis were performed on a client sample and on non-client samples within the analytical batches. The RPDs for VOCs are within the laboratory control limit of 30% RPD.

Surrogate Recoveries

USEPA Method 8260D:
The surrogate percent recovery (%R) results for the samples, method blanks, laboratory duplicates, matrix spike samples, and laboratory control samples are within the laboratory surrogate control limits with the following exception:

- Work Order 2105151: Matrix spike sample surrogate recovery is above control limit criteria. No action is taken since the surrogate recoveries are acceptable and within criteria for the parent sample (DC-7-051121).

Laboratory Control Samples

USEPA Method 8260D:
The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) %R's and RPDs are within the laboratory control limits with the following exceptions:

- Work Order 2105151: LCS (analytical batch 32280) recovery for bromomethane exceeds criteria however no action is necessary since this compound is not detected in the associated sample.

- Work Order 2112190: LCS (analytical batch 34731) recoveries for multiple compounds exceed criteria however no action is necessary since these compounds are not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicates

USEPA Method 8260D:
Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on client samples. MS/MSD %R's and RPDs are within the laboratory control limits with the following exceptions:

- Work Order 2112190: Matrix spike analysis was performed on sample MW-100-120821. Multiple matrix spike recoveries are below the control limit criteria. **All VOC results for field duplicate sample MW-100-120821 and, by default, the parent sample, sample DC-7-120821, are estimated and qualified (UJ/J).**

Other Quality Control Issues

No laboratory quality control issues were identified in the laboratory reports with the following discussion:

- Electronic data deliverables (EDDs) for these Work Orders were provided by the laboratory and data validator qualifiers were entered where needed.

Quantitation Limits

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

Data Assessment

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

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 2:15:00 PM
Project: MVSC
Lab ID: 2112190-007
Matrix: Groundwater
Client Sample ID: DC-7-120821

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	Qual	RL	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	UJ	1.25	µg/L	1	12/13/2021 6:31:59 PM
Chloromethane	ND		0.750	µg/L	1	12/13/2021 6:31:59 PM
Vinyl chloride	ND		0.200	µg/L	1	12/13/2021 6:31:59 PM
Bromomethane	ND		1.20	µg/L	1	12/13/2021 6:31:59 PM
Trichlorofluoromethane (CFC-11)	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
Chloroethane	ND		1.00	µg/L	1	12/13/2021 6:31:59 PM
1,1-Dichloroethene	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
Acetone	ND		6.00	µg/L	1	12/13/2021 6:31:59 PM
Methylene chloride	ND		0.750	µg/L	1	12/13/2021 6:31:59 PM
trans-1,2-Dichloroethene	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
Methyl tert-butyl ether (MTBE)	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
1,1-Dichloroethane	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
cis-1,2-Dichloroethene	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
2-Butanone (MEK)	ND		1.50	µg/L	1	12/13/2021 6:31:59 PM
Chloroform	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
1,1,1-Trichloroethane (TCA)	ND		0.400	µg/L	1	12/13/2021 6:31:59 PM
1,1-Dichloropropene	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
Carbon tetrachloride	ND		0.750	µg/L	1	12/13/2021 6:31:59 PM
1,2-Dichloroethane (EDC)	ND		0.400	µg/L	1	12/13/2021 6:31:59 PM
Benzene	ND		0.440	µg/L	1	12/13/2021 6:31:59 PM
Trichloroethene (TCE)	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
1,2-Dichloropropane	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
Bromodichloromethane	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
Dibromomethane	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
cis-1,3-Dichloropropene	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
Toluene	ND		0.750	µg/L	1	12/13/2021 6:31:59 PM
trans-1,3-Dichloropropylene	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
Methyl Isobutyl Ketone (MIBK)	ND		1.25	µg/L	1	12/13/2021 6:31:59 PM
1,1,2-Trichloroethane	ND		0.350	µg/L	1	12/13/2021 6:31:59 PM
1,3-Dichloropropane	ND	UJ	0.500	µg/L	1	12/13/2021 6:31:59 PM
Tetrachloroethene (PCE)	10.0	J	0.400	µg/L	1	12/13/2021 6:31:59 PM
Dibromochloromethane	ND	UJ	1.00	µg/L	1	12/13/2021 6:31:59 PM
1,2-Dibromoethane (EDB)	ND		0.300	µg/L	1	12/13/2021 6:31:59 PM
2-Hexanone (MBK)	ND		1.00	µg/L	1	12/13/2021 6:31:59 PM
Chlorobenzene	ND		0.500	µg/L	1	12/13/2021 6:31:59 PM
1,1,1,2-Tetrachloroethane	ND		0.300	µg/L	1	12/13/2021 6:31:59 PM
Ethylbenzene	ND		0.400	µg/L	1	12/13/2021 6:31:59 PM
m,p-Xylene	ND		1.00	µg/L	1	12/13/2021 6:31:59 PM
o-Xylene	ND	UJ	0.500	µg/L	1	12/13/2021 6:31:59 PM

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 2:15:00 PM
Project: MVSC
Lab ID: 2112190-007
Matrix: Groundwater
Client Sample ID: **DC-7-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Styrene	ND	UJ	0.500		µg/L	1	12/13/2021 6:31:59 PM
Isopropylbenzene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
Bromoform	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
1,1,2,2-Tetrachloroethane	ND		0.400		µg/L	1	12/13/2021 6:31:59 PM
n-Propylbenzene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
Bromobenzene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
1,3,5-Trimethylbenzene	ND		0.250		µg/L	1	12/13/2021 6:31:59 PM
2-Chlorotoluene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
4-Chlorotoluene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
tert-Butylbenzene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
1,2,3-Trichloropropane	ND		0.400		µg/L	1	12/13/2021 6:31:59 PM
1,2,4-Trichlorobenzene	ND		0.750		µg/L	1	12/13/2021 6:31:59 PM
sec-Butylbenzene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
4-Isopropyltoluene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
1,3-Dichlorobenzene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
1,4-Dichlorobenzene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
n-Butylbenzene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
1,2-Dichlorobenzene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
1,2-Dibromo-3-chloropropane	ND		1.00		µg/L	1	12/13/2021 6:31:59 PM
1,2,4-Trimethylbenzene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
Hexachloro-1,3-butadiene	ND		0.500		µg/L	1	12/13/2021 6:31:59 PM
Naphthalene	ND		1.25		µg/L	1	12/13/2021 6:31:59 PM
1,2,3-Trichlorobenzene	ND	UJ	0.700		µg/L	1	12/13/2021 6:31:59 PM
Surr: Dibromofluoromethane	103		80 - 120		%Rec	1	12/13/2021 6:31:59 PM
Surr: Toluene-d8	96.7		80 - 120		%Rec	1	12/13/2021 6:31:59 PM
Surr: 1-Bromo-4-fluorobenzene	93.8		80 - 120		%Rec	1	12/13/2021 6:31:59 PM

JC 2/10/22

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 3:30:00 PM
Project: MVSC
Lab ID: 2112190-009
Matrix: Groundwater
Client Sample ID: **MW-100-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result	Qual	RL	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	UJ	1.25	µg/L	1	12/13/2021 7:32:16 PM
Chloromethane	ND		0.750	µg/L	1	12/13/2021 7:32:16 PM
Vinyl chloride	ND		0.200	µg/L	1	12/13/2021 7:32:16 PM
Bromomethane	ND		1.20	µg/L	1	12/13/2021 7:32:16 PM
Trichlorofluoromethane (CFC-11)	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
Chloroethane	ND		1.00	µg/L	1	12/13/2021 7:32:16 PM
1,1-Dichloroethene	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
Acetone	ND		6.00	µg/L	1	12/13/2021 7:32:16 PM
Methylene chloride	ND		0.750	µg/L	1	12/13/2021 7:32:16 PM
trans-1,2-Dichloroethene	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
Methyl tert-butyl ether (MTBE)	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
1,1-Dichloroethane	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
cis-1,2-Dichloroethene	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
2-Butanone (MEK)	ND		1.50	µg/L	1	12/13/2021 7:32:16 PM
Chloroform	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
1,1,1-Trichloroethane (TCA)	ND		0.400	µg/L	1	12/13/2021 7:32:16 PM
1,1-Dichloropropene	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
Carbon tetrachloride	ND		0.750	µg/L	1	12/13/2021 7:32:16 PM
1,2-Dichloroethane (EDC)	ND		0.400	µg/L	1	12/13/2021 7:32:16 PM
Benzene	ND		0.440	µg/L	1	12/13/2021 7:32:16 PM
Trichloroethene (TCE)	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
1,2-Dichloropropane	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
Bromodichloromethane	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
Dibromomethane	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
cis-1,3-Dichloropropene	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
Toluene	ND		0.750	µg/L	1	12/13/2021 7:32:16 PM
trans-1,3-Dichloropropylene	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
Methyl Isobutyl Ketone (MIBK)	ND		1.25	µg/L	1	12/13/2021 7:32:16 PM
1,1,2-Trichloroethane	ND		0.350	µg/L	1	12/13/2021 7:32:16 PM
1,3-Dichloropropane	ND	UJ	0.500	µg/L	1	12/13/2021 7:32:16 PM
Tetrachloroethene (PCE)	10.4	J	0.400	µg/L	1	12/13/2021 7:32:16 PM
Dibromochloromethane	ND	UJ	1.00	µg/L	1	12/13/2021 7:32:16 PM
1,2-Dibromoethane (EDB)	ND		0.300	µg/L	1	12/13/2021 7:32:16 PM
2-Hexanone (MBK)	ND		1.00	µg/L	1	12/13/2021 7:32:16 PM
Chlorobenzene	ND		0.500	µg/L	1	12/13/2021 7:32:16 PM
1,1,1,2-Tetrachloroethane	ND		0.300	µg/L	1	12/13/2021 7:32:16 PM
Ethylbenzene	ND		0.400	µg/L	1	12/13/2021 7:32:16 PM
m,p-Xylene	ND		1.00	µg/L	1	12/13/2021 7:32:16 PM
o-Xylene	ND	UJ	0.500	µg/L	1	12/13/2021 7:32:16 PM

JC 2/10./2022

Analytical Report

Work Order: **2112190**
Date Reported: **12/15/2021**

Client: PES Environmental, Inc.
Collection Date: 12/8/2021 3:30:00 PM
Project: MVSC
Lab ID: 2112190-009
Matrix: Groundwater
Client Sample ID: **MW-100-120821**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 34731 Analyst: TN

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Styrene	ND	UJ	0.500		µg/L	1	12/13/2021 7:32:16 PM
Isopropylbenzene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
Bromoform	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
1,1,2,2-Tetrachloroethane	ND		0.400		µg/L	1	12/13/2021 7:32:16 PM
n-Propylbenzene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
Bromobenzene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
1,3,5-Trimethylbenzene	ND		0.250		µg/L	1	12/13/2021 7:32:16 PM
2-Chlorotoluene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
4-Chlorotoluene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
tert-Butylbenzene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
1,2,3-Trichloropropane	ND		0.400		µg/L	1	12/13/2021 7:32:16 PM
1,2,4-Trichlorobenzene	ND		0.750		µg/L	1	12/13/2021 7:32:16 PM
sec-Butylbenzene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
4-Isopropyltoluene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
1,3-Dichlorobenzene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
1,4-Dichlorobenzene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
n-Butylbenzene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
1,2-Dichlorobenzene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
1,2-Dibromo-3-chloropropane	ND		1.00		µg/L	1	12/13/2021 7:32:16 PM
1,2,4-Trimethylbenzene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
Hexachloro-1,3-butadiene	ND		0.500		µg/L	1	12/13/2021 7:32:16 PM
Naphthalene	ND		1.25		µg/L	1	12/13/2021 7:32:16 PM
1,2,3-Trichlorobenzene	ND	UJ	0.700		µg/L	1	12/13/2021 7:32:16 PM
Surr: Dibromofluoromethane	104		80 - 120		%Rec	1	12/13/2021 7:32:16 PM
Surr: Toluene-d8	97.4		80 - 120		%Rec	1	12/13/2021 7:32:16 PM
Surr: 1-Bromo-4-fluorobenzene	92.7		80 - 120		%Rec	1	12/13/2021 7:32:16 PM

JC 2/10./2022

ATTACHMENT C

WELL COMPLETION DETAILS AND HISTORICAL DATA

- Table C1 – Well Completion and Boring Details
- Table C2 – Historical Summary of Groundwater Elevations (1999-2021)
- Table C3 – Historical Summary of Groundwater Analytical Results (1999-2021)
- Table C4 – Historical Summary of Soil Analytical Results (1998 – 2021)
- Table C5 - Soil Vapor Results - March 11 and June 3, 2019

Table C1
Well Completion and Boring Details
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Well	Ecology Well Tag Number	Date Installed	Drilling Method	Location (feet NAD 83/91) Northing	Location (feet NAD 83/91) Easting	Elevation (feet NAVD 88) Monitoring Point	Elevation (feet NAVD 88) Surface Casing Rim	Elevation (feet NAVD 88) Ground Surface	Survey Notes	29.80-39.80 Monument Type	Boring Depth (feet)	Well Diameter (inches)	Screen Depth (ft bgs) Below Ground	Screen Depth (ft bgs) Below Top of Casing	Slot Size (inch)	Filter Pack (ft bgs)	Seal (ft bgs)
Shallow Monitoring Wells																	
MW-1		12/9/99	HSA	165,180.1	1,268,830.5	310.63	310.89	310.81	SCS, 1999 (converted); PES 03/2021	Flush	44	2	34-44	--	0.020	est. 32-44	0-est. 32
MW-2		12/9/99	HSA	165,149.8	1,268,724.6	308.34	309.13	309.12	PES, 08/2015	Flush	43	2	33-43	32.22-42.22	0.020	est. 31-43	0-est. 31
MW-3		4/8/08	HSA	164,857.2	1,268,511.5	311.41	311.76	311.74	PES, 08/2015	Flush	47	2	36-46	35.67-45.67	0.010	34-46	0-34
MW-4		4/8/08	HSA	164,968.5	1,268,493.6	310.47	311.03	311.02	PES, 08/2015	Flush	44	2	34-44	33.45-43.45	0.010	32-44	0-32
MW-5		4/8/08	HSA	165,331.6	1,268,938.6	310.38	310.84	--	PES, 02/2013	Flush	46	2	36-46	35.6-45.6	0.010	34-46	0-34
MW-6		4/9/08	HSA	165,615.5	1,268,908.5	304.14	304.71	304.68	PES, 02/2013; PES, 08/2015	Flush	45	2	35-45	34.46-44.46	0.010	33-45	0-35
MW-7		4/9/08	HSA	165,652.2	1,268,684.8	302.64	303.18	303.17	PES, 02/2013; PES, 08/2015	Flush	45	2	35-45	34.47-44.47	0.010	33-45	0-35
MW-8		8/18/08	HSA	165,681.2	1,268,349.8	280.68	281.05	280.97	PES, 02/2013; PES, 08/2015	Flush	26	2	13-23	12.71-22.71	0.010	11-23	0-11
MW-9		8/18/08	HSA	166,019.8	1,268,663.9	284.97	285.35	285.37	PES, 02/2013; PES, 08/2015	Flush	55	2	32-42	31.6-41.6	0.010	30-42	0-30
MW-10		2/3/11	HSA	165,132.3	1,268,522.8	306.71	307.20	307.19	PES, 02/2013; PES, 08/2015	Flush	42	2	32-42	31.52-41.52	0.010	30-42	0-30
MW-11		2/3/11	HSA	165,122.2	1,268,582.9	307.62	308.13	308.06	PES, 02/2013; PES, 08/2015	Flush	42	2	32-42	31.56-41.56	0.010	30-42	0-30
MW-12		3/28/12	HSA	164,825.0	1,268,516.1	312.80	313.12	313.10	PES, 02/2013; PES, 08/2015	Flush	46.5	2	36-46	35.7-45.7	0.010	34-46.5	0-34
MW-13		3/29/12	HSA	165,036.5	1,268,459.8	308.75	309.16	309.17	PES, 02/2013; PES, 08/2015	Flush	46.5	2	35-45	34.58-44.58	0.010	33-45	0-33
MW-14		3/27/12	HSA	165,261.1	1,268,564.6	303.82	304.24	--	PES, 02/2013	Flush	38	2	28-38	27.6-37.6	0.010	26-38	0-26
MW-15		3/28/12	HSA	165,103.9	1,268,678.7	312.44	312.81	310.30	PES, 02/2013	AG	46.5	2	35-45	37.14-47.14	0.010	33-45.5	0-33
MW-16	BHV646	5/16/13	HSA	165,164.5	1,268,613.3	310.37	311.21	307.92	PES, 05/2013	AG	43	2	27.2-42.2	29.45-44.65	0.020	25-43	0-25
MW-17	BLI196	3/1/19	HSA	165,371.0	1,268,609.7	303.01	303.56	303.60	PES, 03/2019; PES, 10/2019	Flush	39.5	2	28.2-38.2	27.61-37.61	0.010	26-39.5	0-26
MW-18	BLI195	2/28/19	HSA	165,386.9	1,268,688.3	305.26	305.74	305.70	PES, 03/2019; PES, 10/2019	Flush	41.5	2	30.3-40.3	29.86-39.86	0.010	27.5-41.5	0-27.5
MW-20	BLK428	10/24/19	HSA	165,343.4	1,268,662.1	305.51	305.86	306.10	PES, 10/2019	Flush	46	2	30.0-45.0	29.41-44.41	0.010	28-46	0-28
DC-1		10/12/98	HSA	164,940.2	1,268,698.6	312.82	313.34	--	PES, 02/2013	Flush	47	2	40-45	39.5-44.5	0.020	37-47	0-37
DC-2		10/13/98	HSA	165,055.6	1,268,655.1	312.92	313.61	313.70	PES, 02/2013; PES, 08/2015	Flush	50	2	42-47	41.22-46.22	0.020	40-50	0-40
DC-3		10/13/98	HSA	165,056.4	1,268,607.7	313.11	313.68	313.79	PES, 02/2013; PES, 08/2015	Flush	48	2	43-48	42.32-47.32	0.020	41-48	0-41
DC-4		10/13/98	HSA	165,058.1	1,268,537.4	312.35	312.96	312.99	PES, 02/2013; PES, 08/2015	Flush	49	2	44-49	43.36-48.36	0.020	41-49	0-41
DC-6		1/22/99	HSA	--	--	308.46	--	--	SCS, 1999 (converted)	Flush	45	2	40-45	--	0.020	37-45	0-37
DC-7		1/18/99	HSA	165,318.1	1,268,514.4	302.61	303.30	303.26	PES, 02/2013; PES, 08/2015	Flush	40	2	35-40	34.35-39.35	0.020	33-40	0-33
DC-8		1/18/99	HSA	165,328.8	1,268,685.4	306.23	306.70	306.59	PES, 02/2013; PES, 08/2015	Flush	42	2	37-42	36.64-41.64	0.020	34-42	0-34
DC-9A		4/6/99	HSA	165,124.7	1,268,587.3	308.02	--	--	ERM, 08/2008	Flush	38	2	33-38	32.6-37.6	0.020	31-38	0-31
DC-10A		4/5/99	HSA	165,117.2	1,268,497.2	307.73	307.83	307.72	PES, 02/2013; PES, 08/2015	Flush	37	2	32-37	32.01-37.01	0.020	30-37	0-30
DC-11		4/19/07	HSA	165,078.5	1,268,816.1	311.25	311.66	--	PES, 02/2013	Flush	42	2	32-42	31.6-41.6	0.010	30-42	0-30
DC-12		4/18/07	HSA	165,179.8	1,268,852.1	311.22	311.81	311.73	PES, 02/2013; PES 03/2021	Flush	42	2	32-42	31.7-41.7	0.010	30-42	0-30
DC-13		4/19/07	HSA	165,208.9	1,268,827.2	310.20	310.52	--	PES, 02/2013	Flush	42	2	32-42	31.7-41.7	0.010	30-42	0-30
DC-14		4/17/07	HSA	165,355.0	1,268,812.6	308.94	309.49	--	PES, 02/2013	Flush	45	2	35-45	34.4-44.4	0.010	33-45	0-33
DC-15		4/16/07	HSA	165,267.1	1,268,705.9	307.89	308.20	--	PES, 02/2013	Flush	42	2	31-41	30.7-40.7	0.010	29-41	0-29
DC-17		4/16/07	HSA	165,194.2	1,268,528.6	305.16	305.58	305.35	PES, 05/2013	Flush	40	2	30-40	29.81-39.81	0.010	28-40	0-28
DC-18		4/18/07	HSA	165,197.1	1,268,765.0	309.51	309.95	309.93	PES, 02/2013; PES, 08/2015	Flush	42	2	32-42	31.58-41.58	0.010	30-42	0-30
DC-19		6/1/07	HSA	165,039.3	1,268,829.6	313.62	313.82	--	PES, 02/2013	Flush	47	2	37-47	36.8-46.8	0.010	35-47	0-35
DC-20		5/28/08	HSA	165,237.2	1,268,854.8	310.92	311.13	--	PES, 02/2013	Flush	44	2	34-44	33.8-43.8	0.020	32-44	0-32
KMW-1		7/25/05	HSA	165,245.9	1,268,892.6	311.59	311.82	--	PES, 02/2013; PES, 08/2015	Flush	52	2	37-52	36.8-51.8	0.010	34-52	0-34
KMW-2		5/1/06	HSA	165,111.7	1,268,531.0	307.04	307.27	307.13	PES, 02/2013; PES, 08/2015	Flush	50	6	30-40	29.91-39.91	0.010	8-40	0-8
KMW-3		5/1/06	HSA	165,357.4	1,268,462.5	296.99	297.77	297.70	Farallon, 05/2007; PES, 10/2019	Flush	40	2	25.18-35.18	24.47-34.47	0.010	8-35	0-8
KMW-4		3/28/07	HSA	165,175.7	1,268,369.8	299.57	299.84	299.78	Farallon, 05/2007; PES, 08/2015	Flush	34	2	24-34	23.79-33.79	0.020	22-34	0-22
KMW-5		3/28/07	HSA	165,267.7	1,268,380.4	297.22	297.58	297.56	Farallon, 05/2007; PES, 08/2015	Flush	34	2	24-34	23.66-33.66	0.020	22-34	0-22
KMW-6	APS-343	3/27/07	HSA	165,391.1	1,268,399.1	294.80	295.27	295.20	Farallon, 05/2007; PES, 08/2015; PES, 10/2019	Flush	42.5	2	26.18-41.18	25.78-40.78	0.020	22-41	0-22
KMW-7		3/25/07	HSA	165,389.7	1,268,563.6	301.42	302.02	302.00	Farallon, 05/2007; PES, 08/2015; PES, 10/2019	Flush	44	2	29.35-44.35	28.77-43.77	0.020	27-44	0-27

Table C1
Well Completion and Boring Details
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Well	Ecology Well Tag Number	Date Installed	Drilling Method	Location (feet NAD 83/91) Northing	Location (feet NAD 83/91) Easting	Elevation (feet NAVD 88) Monitoring Point	Elevation (feet NAVD 88) Surface Casing Rim	Elevation (feet NAVD 88) Ground Surface	Survey Notes	29.80-39.80 Monument Type	Boring Depth (feet)	Well Diameter (inches)	Screen Depth (ft bgs) Below Ground	Screen Depth (ft bgs) Below Top of Casing	Slot Size (inch)	Filter Pack (ft bgs)	Seal (ft bgs)
KMW-8	APS-341	3/26/07	HSA	165,386.2	1,268,800.7	308.16	308.73	308.70	Farallon, 05/2007; PES, 08/2015; PES, 10/2019	Flush	44	2	29.24-44.24	28.70-43.70	0.020	27-44	0-29
KMW-9		3/27/07	HSA	165,079.0	1,268,726.3	310.33	310.83	310.83	PES, 02/2013; PES, 08/2015	Flush	44	2	34-44	33.5-43.5	0.020	32-44	0-32
Deep Monitoring Wells																	
MW-19	BLK427	10/24/19	HSA	165,346.1	1,268,663.1	305.35	305.77	305.90	PES, 10/2019	Flush	55.5	2	43.9-53.9	43.35-53.35	0.010	42-55	0-42
DC-5		1/22/99	HSA	165,166.5	1,268,526.9	306.03	306.28	306.24	PES, 02/2013; PES, 08/2015	Flush	58.5	2	41-46	40.79-45.79	0.020	39-47	0-39
DC-9B		4/5/99	HSA	165,122.8	1,268,589.4	308.16	--	--	ERM, 08/2008	Flush	60	2	53-58	--	0.020	50.5-58	0-50.5
DC-10B		4/6/99	HSA	165,120.4	1,268,497.5	307.80	308.29	307.89	PES, 02/2013; PES, 08/2015	Flush	56	2	45-50	44.91-49.91	0.020	43-50	0-43
DC-16		4/18/07	HSA	165,169.7	1,268,611.5	307.12	307.79	--	Farallon, 05/2007; PES, 02/2013	Flush	61.5	2	50-60	49.3-59.3	0.010	50-60	0-50
KMW-5D		3/28/07	HSA	165,276.5	1,268,382.0	297.04	297.35	297.32	Farallon, 05/2007; PES, 08/2015	Flush	46	2	41-46	40.72-45.72	0.020	41-46	0-41
Former SCS Soil Vapor Extraction Wells (1999)																	
VES-1 (B1)		1999	--	--	--	--	--	--	PES, 02/2013; PES, 08/2015	Flush	11.5	2	3-11	--	0.020	2.5-11.5	1.5-2.5
VES-2A		1999	--	--	--	--	--	--	PES, 02/2013; PES, 08/2015	Flush	6.5	2	3-6	--	0.020	2.5-6.5	1.5-2.5
VES-2B		1999	--	--	--	--	--	--	PES, 02/2013	Flush	36	2	11.5-35.5	--	0.020	7.5-36	1.5-2.5/6.5-7.5
VES-3 (BH-15)		1999	--	--	--	--	--	--	PES, 02/2013	Flush	6.5	2	3-6	--	0.020	2.5-6.5	1.5-2.5
VES-4 (BH-16)		1999	--	--	--	--	--	--	PES, 02/2013	Flush	6.5	2	3-6	--	0.020	2.5-6.5	1.5-2.5
VES-5 (BH-17)		1999	--	--	--	--	--	--	PES, 02/2013	Flush	6.5	2	3-6	--	0.010	2.5-6.5	1.5-2.5
VES-6A (BH-1)		1999	--	--	--	--	--	--	PES, 02/2013	Flush	6.5	2	3-6	--	0.020	2.5-6.5	1.5-2.5
VES-6B (BH-1)		1999	--	--	--	--	--	--	PES, 02/2013	Flush	36	2	11.5-35.5	--	0.020	7.5-36	1.5-2.5/6.5-7.5
VES-7		1999	--	--	--	--	--	--	PES, 02/2013	Flush	6.5	2	3-6	--	0.020	2.5-6.5	1.5-2.5
Soil Vapor Extraction Wells																	
SVE-1		6/29/09	HSA	164,943.5	1,268,516.2	311.85	312.02	--	PES, 02/2013; PES, 08/2015	Flush	35.5	2	10-35	9.7-34.7	0.020	8-35.5	0-8
SVE-2		6/29/09	HSA	165,000.3	1,268,522.6	312.41	312.58	--	PES, 02/2013; PES, 08/2015	Flush	35.5	2	10-35	9.6-34.6	0.020	8-35.5	0-8
SVE-3		6/30/09	HSA	165,070.2	1,268,536.4	308.28	--	307.84	PES, 02/2013	Flush	30.5	2	10-30	10.44-30.44	0.020	8-30.5	0-8
SVE-4		6/30/09	HSA	165,069.1	1,268,589.2	308.90	--	308.31	PES, 02/2013	Flush	30.5	2	10-30	10.59-30.59	0.020	8-30.5	0-8
SVE-5		6/30/09	HSA	165,068.8	1,268,655.3	309.91	--	309.31	PES, 02/2013	Flush	30.5	2	10-30	10.6-30.6	0.020	8-30.5	0-8
SVE-6		6/26/09	AKVAC	165,057.5	1,268,693.4	313.03	313.57	--	PES, 02/2013	Flush	10	2	5-10	4.6-9.6	0.010	4-10	0-4
SVE-7		6/30/09	HSA	165,077.5	1,268,704.6	310.71	--	309.95	PES, 02/2013	Flush	30.5	2	10-30	10.76-30.76	0.020	8-30.5	0-8
SVE-8		6/30/09	HSA	165,085.8	1,268,738.3	311.48	--	310.56	PES, 02/2013	Flush	30.5	2	10-30	10.92-30.92	0.020	8-30.5	0-8
SVE-9		6/29/09	HSA	165,060.0	1,268,819.5	313.31	--	312.13	PES, 02/2013	Flush	30.5	2	10-30	11.18-31.18	0.020	8-30.5	0-8
SVE-10		6/30/09	HSA	165,187.7	1,268,841.1	310.69	311.20	311.09	PES, 02/2013; PES 03/2021	Flush	30.5	2	10-30	9.8-29.8	0.020	8-30.5	0-8
SVE-11A	BIE307	11/18/13	HSA	164,824.5	1,268,484.7	--	311.21	--	PES, 08/2015	Flush	20	4	5-19.98	4.6-19.58	0.020	3-20	0-3
SVE-11B	BIE301	11/18/13	HSA	164,831.2	1,268,492.0	--	311.43	--	PES, 08/2015	Flush	57	4	20-35	19.6-34.6	0.020	18-36	0-18
SVE-12A	BIE303	11/19/13	HSA	164,851.6	1,268,512.2	--	312.06	--	PES, 08/2015	Flush	20	4	5-19.98	4.6-19.58	0.020	3-20	0-3
SVE-12B	BIE304	11/20/13	HSA	164,853.8	1,268,506.7	--	311.52	--	PES, 08/2015	Flush	57	4	20-35	19.6-34.6	0.020	18-36	0-18
SVE-13A	BIE306	11/22/13	HSA	164,912.3	1,268,505.4	--	310.95	--	PES, 08/2015	Flush	20	4	5-19.98	4.6-19.58	0.020	3-20	0-3
SVE-13B	BIE305	11/21/13	HSA	164,903.3	1,268,505.6	--	310.99	--	PES, 08/2015	Flush	57.5	4	20-35	19.6-34.6	0.020	18-36	0-18
SVE-14	BID732	10/13/14	HSA	164,945.9	1,268,498.5	--	311.06	--	PES, 08/2015	Flush	36	4	19.63-34.63	19.23-34.23	0.020	18.3-36	3-18.3
SVE-15	BID736	10/15/14	HSA	165,000.5	1,268,503.7	--	311.30	--	PES, 08/2015	Flush	36	4	20.61-34.96	20.21-34.56	0.020	19.3-36	3.5-19.3
SVE-16	BID737	10/15/14	HSA	165,035.5	1,268,501.1	--	310.83	--	PES, 08/2015	Flush	36	4	20.49-34.79	20.09-34.39	0.020	18-36	3.5-18
SVE-17	BID709	9/24/14	HSA	165,071.8	1,268,503.4	--	308.39	--	PES, 08/2015	Flush	31	4	19.91-29.91	19.51-29.51	0.020	18-31	3.3-18
SVE-18	BID708	9/23/14	HSA	165,107.0	1,268,504.1	--	307.34	--	PES, 08/2015	Flush	31	4	19.79-29.79	19.39-29.39	0.020	17.9-31	16-17.9
SVE-19	BID715	9/29/14	HSA	165,091.9	1,268,579.7	--	308.53	--	PES, 08/2015	Flush	31	4	19.99-29.99	19.59-29.59	0.020	18-31	3.5-18

Table C1
Well Completion and Boring Details
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Well	Ecology Well Tag Number	Date Installed	Drilling Method	Location (feet NAD 83/91) Northing	Location (feet NAD 83/91) Easting	Elevation (feet NAVD 88) Monitoring Point	Elevation (feet NAVD 88) Surface Casing Rim	Elevation (feet NAVD 88) Ground Surface	Survey Notes	29.80-39.80 Monument Type	Boring Depth (feet)	Well Diameter (inches)	Screen Depth (ft bgs) Below Ground	Screen Depth (ft bgs) Below Top of Casing	Slot Size (inch)	Filter Pack (ft bgs)	Seal (ft bgs)
SVE-20	BLZ 286	8/30/21	HSA	165,057.7	1,268,696.8	313.02	313.37	313.42	PES, 03/2021	Flush	30	4	10.3-25.4	9.9-25	0.020	8-25	3-8
SVE-21	BLZ 287	8/30/21	HSA	165,057.2	1,268,703.5	313.04	313.47	313.51	PES, 03/2021	Flush	38	4	25.7-37.7	25.3-37.3	0.020	23-38	3-23
SVE-22	BLZ 288	9/1/21	HSA	165,085.5	1,268,715.6	309.90	310.27	310.20	PES, 03/2021	Flush	36	4	20.6-35.6	20.2-35.2	0.020	18-36	3-18
SVE-23	BLZ 289	9/1/21	HSA	165,180.7	1,268,839.9	310.71	311.22	311.16	PES, 03/2021	Flush	35.7	4	20.3-35.3	19.9-34.9	0.020	18-36	3-18
SVE-24	BLZ 290	9/1/21	HSA	165,175.9	1,268,862.8	312.20	312.53	312.50	PES, 03/2021	Flush	23	4	10.3-22.6	9.9-22.2	0.020	8-23	3-8
SVE-25	BLZ 285	9/2/21	HSA	165,164.6	1,268,852.0	311.32	311.86	311.77	PES, 03/2021	Flush	36.9	4	22.8-35.7	22.4-35.3	0.020	18-37	3-18
Vapor Monitoring Probes																	
VMP-1 (B-5)		3/26/08	DP	164,828.0	1,268,482.4	310.91	311.01	--	PES, 02/2013; PES, 08/2015	Flush	30	0.75	10-15	9.7-14.7	0.010	7-30	0-7
VMP-2 (B-7)		3/25/08	DP	164,964.6	1,268,493.8	310.97	311.04	--	PES, 02/2013; PES, 08/2015	Flush	30	0.75	10-15	9.8-14.8	0.010	7-30	0-7
VMP-3 (B-9)		3/25/08	DP	165,028.4	1,268,497.6	310.58	310.71	--	PES, 02/2013	Flush	30	0.75	10-15	9.9-14.9	0.010	7-30	0-7
VMP-4 (B-11)		3/27/08	DP	165,079.0	1,268,533.8	307.67	308.00	--	PES, 02/2013	Flush	30	0.75	10-15	9.7-14.7	0.010	7-30	0-7
VMP-5 (B-12)		3/27/08	DP	165,083.7	1,268,602.8	308.22	308.48	--	PES, 02/2013	Flush	25	0.75	10-15	9.7-14.7	0.010	7-25	0-7
VMP-6 (B-13)		3/27/08	DP	165,071.2	1,268,674.9	308.95	309.18	--	PES, 02/2013	Flush	26	0.75	10-15	9.8-14.8	0.010	7-26	0-7
Recirculation Well																	
TW-1		5/2/06	HSA	165,114.8	1,268,571.3	--	--	--	PES, 02/2013	AG	50	6	25-35/45-50	--	0.010	22-35/40-	0-22/35-40
Pilot Test Injection Well																	
IW-1		--	--	--	--	--	--	--	--	AG	38	--	--	--	--	--	--
Air Sparging Wells																	
AS-1	BHV647	5/17/13	HSA	165,116.9	1,268,511.0	--	307.23	307.34	PES, 05/2013; PES, 08/2015	Flush	48	1	43.8-45.8	43.4-45.4	0.010	43.5-48	0-43.5
AS-2	BID714	9/29/14	HSA	165,093.2	1,268,557.0	--	308.30	--	PES, 08/2015	Flush	53	2	48.08-51.13	47.68-50.73	0.020	48-53	3.0-48
AS-3	BID718	10/1/14	HSA	165,091.7	1,268,574.0	--	308.44	--	PES, 08/2015	Flush	51	2	48.14-50.14	47.74-49.74	0.020	46-51	3.6-46
AS-4	BID717	9/30/14	HSA	165,073.3	1,268,590.4	--	308.25	--	PES, 08/2015	Flush	51	2	48.82-50.80	48.42-50.4	0.020	47.3-51	3.3-47.3
AS-5	BID716	9/30/14	HSA	165,073.7	1,268,566.0	--	307.97	--	PES, 08/2015	Flush	52	2	48.77-50.79	48.37-50.39	0.020	47.5-52	3.5-47.5
AS-6	BID713	9/26/14	HSA	165,073.2	1,268,541.5	--	307.89	--	PES, 08/2015	Flush	52	2	48.91-50.92	48.51-50.52	0.020	47.6-52	3.5-47.6
AS-7	BID710	9/24/14	HSA	165,080.3	1,268,521.9	--	308.01	--	PES, 08/2015	Flush	50.5	2	46.93-48.91	46.53-48.51	0.020	46-50.5	3.5-43
AS-8	BID740	10/17/14	HSA	165,058.0	1,268,525.1	--	312.52	--	PES, 08/2015	Flush	54	2	52.10-54.14	51.7-53.74	0.020	51-54.31	3.5-51
AS-9	BID739	10/16/14	HSA	165,029.5	1,268,522.9	--	312.52	--	PES, 08/2015	Flush	54	2	51.09-53.11	50.69-52.71	0.020	50-54	4-50
AS-10	BID733	10/14/14	HSA	165,004.5	1,268,521.9	--	312.52	--	PES, 08/2015	Flush	56	2	52.78-54.80	52.38-54.4	0.020	52-56	3.9-52
AS-11	BID731	10/13/14	HSA	164,976.2	1,268,521.3	--	312.57	--	PES, 08/2015	Flush	54.5	2	52.27-54.27	51.87-53.87	0.020	50.51-54.5	3-50.5
AS-12	BID729	10/10/14	HSA	164,948.4	1,268,520.9	--	312.34	--	PES, 08/2015	Flush	54.24	2	52.06-54.07	51.66-53.67	0.020	50.7-54.24	3.5-50.7
AS-13	BID728	10/9/14	HSA	164,920.9	1,268,520.2	--	311.72	--	PES, 08/2015	Flush	54	2	51.64-53.67	51.24-53.27	0.020	50.7-54	3.5-50.7
AS-14	BID726	10/8/14	HSA	164,891.0	1,268,520.2	--	311.93	--	PES, 08/2015	Flush	54.09	2	51.88-53.92	51.48-53.52	0.020	50.9-54.09	3.3-50.09
AS-15	BID723	10/6/14	HSA	164,865.7	1,268,520.3	--	312.35	--	PES, 08/2015	Flush	54	2	50.89-52.87	50.49-52.47	0.020	50-54	3.5-50
AS-16	BID724	10/7/14	HSA	164,841.0	1,268,511.9	--	312.37	--	PES, 08/2015	Flush	54	2	51.89-53.97	51.49-53.57	0.020	51-54.04	3.3-51
AS-17	BID721	10/3/14	HSA	164,821.9	1,268,488.3	--	311.44	--	PES, 08/2015	Flush	54.02	2	51.87-53.85	51.47-53.45	0.020	50.5-54.02	3.3-50.5
AS-18	BID719	10/2/14	HSA	164,810.9	1,268,465.6	--	310.51	--	PES, 08/2015	Flush	54.5	2	50.37-52.35	49.97-51.95	0.020	49.5-54.5	3.6-49.5
AS-19	BID720	10/3/14	HSA	164,834.5	1,268,474.4	--	310.67	--	PES, 08/2015	Flush	54.08	2	51.94-53.91	51.54-53.51	0.020	50.7-54.08	3.0-54.08
AS-20	BID722	10/6/14	HSA	164,852.1	1,268,491.4	--	311.00	--	PES, 08/2015	Flush	54	2	50.96-52.94	50.56-52.54	0.020	49.6-54	3.5-49.6
AS-21	BID725	10/7/14	HSA	164,879.0	1,268,495.8	--	310.98	--	PES, 08/2015	Flush	55	2	51.92-53.92	51.52-53.52	0.020	50.7-55	3.5-50.7
AS-22	BID727	10/8/14	HSA	164,907.4	1,268,496.1	--	310.72	--	PES, 08/2015	Flush	55	2	52.38-54.40	51.98-54	0.020	51.5-55	3.5-51.5
AS-23	BID730	10/10/14	HSA	164,935.3	1,268,497.1	--	310.88	--	PES, 08/2015	Flush	55	2	52.72-54.76	52.32-54.36	0.020	52-55	3.7-55
AS-24	BID734	10/14/14	HSA	164,963.7	1,268,494.9	--	311.08	--	PES, 08/2015	Flush	55	2	52.68-54.74	52.28-54.34	0.020	52-55	3.5-52
AS-25	BID735	10/15/14	HSA	164,993.3	1,268,503.1	--	311.33	--	PES, 08/2015	Flush	56	2	53.35-55.36	52.95-54.96	0.020	51.9-56	3.5-51.9
AS-26	BID738	10/16/14	HSA	165,018.0	1,268,497.2	--	310.75	--	PES, 08/2015	Flush	55.5	2	53.10-54.14	52.7-53.74	0.020	52-55.5	4-52
AS-27	BID741	10/17/14	HSA	165,047.3	1,268,497.3	--	310.99	--	PES, 08/2015	Flush	55.5	2	53.10-55.14	52.7-54.74	0.020	52-55.5	4-52
AS-28	BID706	9/22/14	HSA	165,077.4	1,268,498.9	--	308.11	--	PES, 08/2015	Flush	50.5	2	47.94-49.88	47.54-49.48	0.020	47.5-50.5	3.5-47.5

Table C1
Well Completion and Boring Details
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Well	Ecology Well Tag Number	Date Installed	Drilling Method	Location (feet NAD 83/91) Northing	Location (feet NAD 83/91) Easting	Elevation (feet NAVD 88) Monitoring Point	Elevation (feet NAVD 88) Surface Casing Rim	Elevation (feet NAVD 88) Ground Surface	Survey Notes	29.80-39.80 Monument Type	Boring Depth (feet)	Well Diameter (inches)	Screen Depth (ft bgs) Below Ground	Screen Depth (ft bgs) Below Top of Casing	Slot Size (inch)	Filter Pack (ft bgs)	Seal (ft bgs)
AS-29	BID707	9/23/14	HSA	165,098.0	1,268,498.4	--	307.74	--	PES, 08/2015	Flush	51	2	48.10-50.08	47.7-49.68	0.020	47-51	3.3-47
AS-30	BID711	9/25/14	HSA	165,100.2	1,268,516.2	--	307.36	--	PES, 08/2015	Flush	52	2	48.24-50.24	47.84-49.84	0.020	46.8-52	3.8-46.8
AS-31	BID712	9/26/14	HSA	165,098.2	1,268,535.6	--	308.10	--	PES, 08/2015	Flush	52.5	2	48.86-50.89	48.46-50.49	0.020	47.6-52.5	3.5-47.6
Supplemental Investigation Borings																	
SB-10	--	4/16/18	DP	164,837.8	1,268,523.0	--	--	313.30	PES, 05/2018	--	11	2.25	--	--	--	--	--
SB-11	--	4/16/18	DP	164,831.3	1,268,470.8	--	--	310.59	PES, 05/2018	--	15	2.25	--	--	--	--	--
SB-12	--	4/16/18	DP	164,812.7	1,268,480.9	--	--	311.18	PES, 05/2018	--	11	2.25	--	--	--	--	--
SB-13	--	4/16/18	DP	165,056.3	1,268,696.8	--	--	313.34	PES, 05/2018	--	29	2.25	--	--	--	--	--
SB-13A	--	4/25/18	DP	165,055.2	1,268,697.2	--	--	313.38	PES, 05/2018	--	33	2.25	--	--	--	--	--
SB-13B	--	4/25/18	DP	165,067.3	1,268,697.4	--	--	309.32	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-14	--	4/16/18	DP	165,056.3	1,268,717.0	--	--	313.60	PES, 05/2018	--	31.5	2.25	--	--	--	--	--
SB-14A	--	4/25/18	DP	165,056.2	1,268,717.8	--	--	313.60	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-15	--	4/17/18	DP	165,078.3	1,268,721.7	--	--	310.28	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-16	--	4/17/18	DP	165,172.1	1,268,822.2	--	--	310.61	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-17	--	4/18/18	DP	165,175.7	1,268,798.0	--	--	310.03	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-18	--	4/18/18	DP	165,201.4	1,268,799.7	--	--	309.93	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-19	--	4/19/18	DP	165,132.6	1,268,649.4	--	--	308.76	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-20	--	4/19/18	DP	165,154.5	1,268,680.2	--	--	309.00	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-21	--	4/19/18	DP	165,187.4	1,268,742.4	--	--	309.65	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-22	--	4/20/18	DP	165,173.0	1,268,709.8	--	--	309.07	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-23	--	4/20/18	DP	165,109.3	1,268,725.1	--	--	309.76	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-24	--	4/23/18	DP	165,113.2	1,268,695.3	--	--	310.24	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-25	--	4/23/18	DP	165,107.6	1,268,755.1	--	--	310.27	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-26	--	4/24/18	DP	165,177.8	1,268,857.4	--	--	312.30	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-27	--	4/24/18	DP	165,166.7	1,268,856.4	--	--	311.62	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-28	--	4/24/18	DP	165,209.6	1,268,850.2	--	--	310.94	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-29	--	4/24/18	DP	165,116.8	1,268,669.9	--	--	309.39	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-30	--	4/25/18	DP	165,196.5	1,268,529.1	--	--	304.82	PES, 05/2018	--	40	2.25	--	--	--	--	--
Soil Vapor Sampling Probes																	
SVS-10	--	11/5/03	HA	--	--	--	--	--	--	Flush	1.0	1.0	0.96-1.00	--	Mesh	0.5-1.0	0-0.5
SVS-11	--	4/16/18	HA	--	--	--	--	--	--	Flush	1.3	0.63	1.27-1.30	--	Mesh	0.5-1.0	0-0.5
SVS-12	--	4/16/18	HA	--	--	--	--	--	--	Flush	1.3	0.63	1.27-1.30	--	Mesh	0.5-1.0	0-0.5
SVS-13	--	4/16/18	HA	--	--	--	--	--	--	Flush	1.2	0.63	1.27-1.30	--	Mesh	0.5-1.0	0-0.5
SVS-14	--	4/25/18	HA	--	--	--	--	--	--	Flush	1.3	0.63	1.27-1.30	--	Mesh	0.5-1.0	0-0.5
SVS-15	--	4/25/18	HA	--	--	--	--	--	--	Flush	1.3	0.63	1.27-1.30	--	Mesh	0.5-1.0	0-0.5
SVS-16	--	4/25/18	HA	--	--	--	--	--	--	Flush	1.3	0.63	1.27-1.30	--	Mesh	0.5-1.0	0-0.5
SVS-17	--	4/16/18	HA	--	--	--	--	--	--	Flush	5.0	2.25	4.5-5.0	--	Mesh	4-5	0-4

Table C1
Well Completion and Boring Details
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Well	Ecology Well Tag Number	Date Installed	Drilling Method	Location (feet NAD 83/91) Northing	Location (feet NAD 83/91) Easting	Elevation (feet NAVD 88) Monitoring Point	Elevation (feet NAVD 88) Surface Casing Rim	Elevation (feet NAVD 88) Ground Surface	Survey Notes	29.80-39.80 Monument Type	Boring Depth (feet)	Well Diameter (inches)	Screen Depth (ft bgs) Below Ground	Screen Depth (ft bgs) Below Top of Casing	Slot Size (inch)	Filter Pack (ft bgs)	Seal (ft bgs)

Notes:

1. Northing and easting in feet relative to the Washington State Plane System North Zone (NAD 83/91)
2. Elevations in feet relative to the North American Vertical Datum (NAVD 88)
3. Monitoring point = top of the PVC well casing
4. All depths shown in feet below ground surface (ft bgs)
5. All wells completed with Schedule 40 PVC with the exception of AS-1 (Schdedule 80 PVC)
6. Drilling methods include hollow stem auger (HSA), direct push (DP), vacuum truck with air knife (AKVAC), and hand augered (HA)
7. '-- = not documented or unknown
8. Surface elevations for the direct push borings represents ground surface adjacent to the boring
9. Screened intervals are documented on boring logs and are typically based on a field measurements relative to ground surface at the time of drilling. Screened intervals relative to top of casing are estimated using well field construction measurements, surveyed top of casing elevations, surveyed ground surface elevations, and in some cases surveyed monument rim elevations. If ground or rim elevations are not surveyed, then top of casing is assumed to be 0.4 ft depth.
10. Monitoring wells MW-1, DC-6, DC-9A, DC-9B are missing or destroyed. The 1999 SCS VES wells have been decommissioned.
11. Temporary well screens consisting of Geoprobe SP22 stainless steel slotted tooling were deployed in direct push borings SB-19 through SB-25 and SB-29.
12. Soil vapor sampling probe screens are constructed of fine metal mesh.
13. Soil vapor extraction wells SVE-24 and SVE-25 were installed at a 45 degree angle. The wells were cut off 4 feet below ground surface and the casings extended vertically. Depth intervals have been converted from length along the boring by dividing by 1.41.

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-1	12/10/1999	309.97	37.44	272.53
MW-1	2/9/2005	309.97	39.52	270.45
MW-1	4/11/2006	309.97	37.78	272.19
MW-1	10/26/2006	309.97	39.22	270.75
MW-1	4/24/2007	309.97	36.61	273.36
MW-1	8/21/2008	309.97	37.32	272.65
MW-2	12/10/1999	307.69	35.60	272.09
MW-2	11/5/2010	307.69	37.03	270.66
MW-2	2/11/2011	307.69	35.81	271.88
MW-2	5/30/2011	307.69	34.40	273.29
MW-2	7/19/2011	307.69	34.71	272.98
MW-2	10/17/2011	307.69	35.80	271.89
MW-2	4/2/2012	307.69	36.11	271.58
MW-2	5/28/2013	308.56	35.73	272.83
MW-2	4/14/2014	308.56	36.17	272.39
MW-2	10/21/2014	308.34	36.48	271.86
MW-2	12/11/2015	308.34	36.89	271.45
MW-2	12/13/2016	308.34	36.09	272.25
MW-2	3/13/2017	308.34	34.93	273.41
MW-2	7/17/2017	308.34	33.97	274.37
MW-2	10/20/2017	308.34	35.45	272.89
MW-2	1/24/2018	308.34	35.61	272.73
MW-2	4/17/2018	308.34	34.93	273.41
MW-2	7/18/2018	308.34	35.12	273.22
MW-2	10/15/2018	308.34	36.26	272.08
MW-2	10/24/2019	308.34	37.20	271.14
MW-2	12/7/2021	308.34	37.05	271.29
MW-3	8/21/2008	311.49	39.77	271.72
MW-3	11/5/2010	311.49	39.43	272.06
MW-3	2/11/2011	311.49	38.10	273.39
MW-3	5/30/2011	311.49	36.66	274.83
MW-3	7/19/2011	311.49	37.03	274.46
MW-3	10/17/2011	311.49	38.18	273.31
MW-3	4/2/2012	311.49	38.39	273.10
MW-3	5/28/2013	311.62	38.09	273.53
MW-3	10/21/2014	311.41	38.91	272.50
MW-3	12/9/2015	311.41	39.28	272.13
MW-3	12/13/2016	311.41	38.44	272.97
MW-3	3/13/2017	311.41	37.09	274.32
MW-3	7/17/2017	311.41	36.21	275.20
MW-3	10/20/2017	311.41	37.61	273.80
MW-3	1/24/2018	311.41	37.73	273.68
MW-3	4/17/2018	311.41	37.24	274.17
MW-3	7/18/2018	311.41	37.52	273.89
MW-3	10/15/2018	311.41	38.68	272.73
MW-3	10/24/2019	311.41	39.68	271.73

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-3	12/7/2021	311.41	39.34	272.07
MW-4	11/5/2010	310.54	38.74	271.80
MW-4	2/11/2011	310.54	37.41	273.13
MW-4	5/30/2011	310.54	35.99	274.55
MW-4	7/19/2011	310.54	36.37	274.17
MW-4	10/17/2011	310.54	37.50	273.04
MW-4	4/2/2012	310.54	37.67	272.87
MW-4	5/28/2013	310.68	37.40	273.28
MW-4	10/21/2014	310.47	38.13	272.34
MW-4	12/9/2015	310.47	38.60	271.87
MW-4	12/13/2016	310.47	37.36	273.11
MW-4	3/13/2017	310.47	36.42	274.05
MW-4	7/17/2017	310.47	35.59	274.88
MW-4	10/20/2017	310.47	37.17	273.30
MW-4	1/24/2018	310.47	37.04	273.43
MW-4	4/17/2018	310.47	36.59	273.88
MW-4	7/18/2018	310.47	36.86	273.61
MW-4	10/15/2018	310.47	38.01	272.46
MW-4	10/24/2019	310.47	39.00	271.47
MW-4	12/7/2021	310.47	38.84	271.63
MW-5	8/21/2008	310.28	39.96	270.32
MW-5	11/5/2010	310.28	39.73	270.55
MW-5	2/11/2011	310.28	38.60	271.68
MW-5	5/30/2011	310.28	37.24	273.04
MW-5	7/19/2011	310.28	37.51	272.77
MW-5	10/17/2011	310.28	38.54	271.74
MW-5	4/2/2012	310.28	38.90	271.38
MW-5	10/21/2014	310.38	39.17	271.21
MW-5	12/9/2015	310.38	39.69	270.69
MW-5	12/13/2016	310.38	38.80	271.58
MW-5	3/13/2017	310.38	37.80	272.58
MW-5	7/17/2017	310.38	36.80	273.58
MW-5	10/20/2017	310.38	38.17	272.21
MW-5	1/24/2018	310.38	38.60	271.78
MW-5	4/17/2018	310.38	37.71	272.67
MW-5	7/18/2018	310.38	37.89	272.49
MW-5	10/15/2018	310.38	38.92	271.46
MW-5	10/24/2019	310.38	39.85	270.53
MW-6	8/21/2008	304.27	37.46	266.81
MW-6	11/5/2010	304.27	37.25	267.02
MW-6	2/11/2011	304.27	36.30	267.97
MW-6	5/30/2011	304.27	35.50	268.77
MW-6	7/19/2011	304.27	35.38	268.89
MW-6	10/17/2011	304.27	36.24	268.03
MW-6	4/2/2012	304.27	36.53	267.74

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-6	10/21/2014	304.14	37.79	266.35
MW-6	12/9/2015	304.14	37.22	266.92
MW-6	12/13/2016	304.14	36.49	267.65
MW-6	3/13/2017	304.14	35.68	268.46
MW-6	7/17/2017	304.14	34.79	269.35
MW-6	10/20/2017	304.14	38.24	265.90
MW-6	1/24/2018	304.14	36.08	268.06
MW-6	4/17/2018	304.14	35.61	268.53
MW-6	7/18/2018	304.14	35.71	268.43
MW-6	10/15/2018	304.14	36.58	267.56
MW-6	10/25/2019	304.14	37.37	266.77
MW-7	8/21/2008	302.76	39.00	263.76
MW-7	11/5/2010	302.76	38.74	264.02
MW-7	2/11/2011	302.76	37.61	265.15
MW-7	5/30/2011	302.76	36.09	266.67
MW-7	7/19/2011	302.76	36.43	266.33
MW-7	10/17/2011	302.76	37.43	265.33
MW-7	4/2/2012	302.76	37.52	265.24
MW-7	5/28/2013	302.76	37.48	265.28
MW-7	10/30/2014	302.64	35.80	266.84
MW-7	12/9/2015	302.64	38.75	263.89
MW-7	12/13/2016	302.64	37.79	264.85
MW-7	3/13/2017	302.64	36.79	265.85
MW-7	7/17/2017	302.64	35.75	266.89
MW-7	10/20/2017	302.64	37.16	265.48
MW-7	1/24/2018	302.64	37.33	265.31
MW-7	4/17/2018	302.64	36.79	265.85
MW-7	7/18/2018	302.64	37.00	265.64
MW-7	10/23/2018	302.64	38.15	264.49
MW-7	10/25/2019	302.64	39.04	263.60
MW-7	12/7/2021	302.64	38.78	263.86
MW-8	8/21/2008	280.08	12.78	267.30
MW-8	2/11/2011	280.08	11.11	268.97
MW-8	5/30/2011	280.08	10.20	269.88
MW-8	7/19/2011	280.08	10.66	269.42
MW-8	10/17/2011	280.08	11.52	268.56
MW-8	4/2/2012	280.08	11.09	268.99
MW-8	10/21/2014	280.68	12.12	268.56
MW-8	12/9/2015	280.68	11.81	268.87
MW-8	12/13/2016	280.68	11.40	269.28
MW-8	3/13/2017	280.68	10.30	270.38
MW-8	7/17/2017	280.68	10.26	270.42
MW-8	10/20/2017	280.68	10.25	270.43
MW-8	1/24/2018	280.68	10.80	269.88
MW-8	4/17/2018	280.68	10.50	270.18
MW-8	7/18/2018	280.68	11.22	269.46

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-8	10/16/2018	280.68	12.09	268.59
MW-8	10/25/2019	280.68	12.74	267.94
MW-9	8/21/2008	285.11	32.24	252.87
MW-9	11/5/2010	285.11	31.98	253.13
MW-9	2/11/2011	285.11	30.93	254.18
MW-9	5/30/2011	285.11	29.76	255.35
MW-9	7/19/2011	285.11	30.12	254.99
MW-9	10/17/2011	285.11	31.04	254.07
MW-9	4/2/2012	285.11	31.05	254.06
MW-9	10/21/2014	284.97	31.68	253.29
MW-9	12/9/2015	284.97	32.06	252.91
MW-9	12/13/2016	284.97	31.24	253.73
MW-9	3/13/2017	284.97	30.20	254.77
MW-9	7/17/2017	284.97	29.59	255.38
MW-9	10/20/2017	284.97	30.75	254.22
MW-9	1/24/2018	284.97	30.84	254.13
MW-9	4/17/2018	284.97	30.43	254.54
MW-9	7/18/2018	284.97	30.60	254.37
MW-9	10/16/2018	284.97	31.40	253.57
MW-9	10/25/2019	284.97	32.22	252.75
MW-9	12/7/2021	284.97	32.11	252.86
MW-10	2/11/2011	306.70	34.04	272.66
MW-10	5/30/2011	306.70	32.69	274.01
MW-10	7/19/2011	306.70	33.05	273.65
MW-10	10/17/2011	306.70	34.13	272.57
MW-10	4/2/2012	306.70	34.31	272.39
MW-10	5/28/2013	306.91	34.03	272.88
MW-10	10/21/2014	306.71	34.81	271.90
MW-10	12/9/2015	306.71	35.22	271.49
MW-10	12/13/2016	306.71	34.41	272.30
MW-10	3/13/2017	306.71	33.15	273.56
MW-10	7/17/2017	306.71	32.34	274.37
MW-10	10/20/2017	306.71	33.82	272.89
MW-10	1/24/2018	306.71	33.82	272.89
MW-10	4/17/2018	306.71	33.30	273.41
MW-10	7/18/2018	306.71	33.55	273.16
MW-10	10/15/2018	306.71	34.66	272.05
MW-10	5/21/2019	306.71	34.62	272.09
MW-10	10/24/2019	306.71	35.62	271.09
MW-10	12/7/2021	306.71	35.32	271.39
MW-11	2/11/2011	307.63	35.01	272.62
MW-11	5/30/2011	307.63	33.63	274.00
MW-11	7/19/2011	307.63	33.97	273.66
MW-11	10/17/2011	307.63	35.05	272.58
MW-11	4/2/2012	307.63	35.29	272.34

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-11	5/28/2013	307.85	34.98	272.87
MW-11	10/21/2014	307.62	35.78	271.84
MW-11	12/9/2015	307.62	36.16	271.46
MW-11	12/13/2016	307.62	35.33	272.29
MW-11	3/13/2017	307.62	34.11	273.51
MW-11	7/17/2017	307.62	33.25	274.37
MW-11	10/20/2017	307.62	34.74	272.88
MW-11	1/24/2018	307.62	34.77	272.85
MW-11	4/17/2018	307.62	34.21	273.41
MW-11	7/18/2018	307.62	34.45	273.17
MW-11	10/19/2018	307.62	35.61	272.01
MW-11	5/21/2019	307.62	35.55	272.07
MW-11	10/24/2019	307.62	36.53	271.09
MW-11	12/7/2021	307.62	36.27	271.35
MW-12	4/2/2012	312.92	39.69	273.23
MW-12	5/28/2013	312.95	39.40	273.55
MW-12	10/21/2014	312.80	40.20	272.60
MW-12	12/9/2015	312.80	40.59	272.21
MW-12	12/13/2016	312.80	39.70	273.10
MW-12	3/13/2017	312.80	38.39	274.41
MW-12	7/17/2017	312.80	37.47	275.33
MW-12	10/20/2017	312.80	39.01	273.79
MW-12	1/24/2018	312.80	39.01	273.79
MW-12	4/17/2018	312.80	38.49	274.31
MW-12	7/18/2018	312.80	38.75	274.05
MW-12	10/15/2018	312.80	39.94	272.86
MW-12	10/24/2019	312.80	40.96	271.84
MW-13	4/2/2012	308.88	36.04	272.84
MW-13	5/28/2013	308.90	35.82	273.08
MW-13	10/21/2014	308.75	36.66	272.09
MW-13	12/9/2015	308.75	37.00	271.75
MW-13	12/13/2016	308.75	36.13	272.62
MW-13	3/13/2017	308.75	34.78	273.97
MW-13	7/17/2017	308.75	33.99	274.76
MW-13	10/20/2017	308.75	35.45	273.30
MW-13	1/24/2018	308.75	35.45	273.30
MW-13	4/17/2018	308.75	34.98	273.77
MW-13	7/18/2018	308.75	35.24	273.51
MW-13	10/15/2018	308.75	36.40	272.35
MW-13	10/24/2019	308.75	38.40	270.35
MW-14	4/2/2012	303.78	31.84	271.94
MW-14	5/28/2013	303.82	31.57	272.25
MW-14	10/21/2014	303.82	32.34	271.48
MW-14	12/11/2015	303.82	32.65	271.17
MW-14	12/13/2016	303.82	31.90	271.92

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-14	3/13/2017	303.82	30.73	273.09
MW-14	7/17/2017	303.82	29.94	273.88
MW-14	10/20/2017	303.82	31.36	272.46
MW-14	1/24/2018	303.82	31.33	272.49
MW-14	4/17/2018	303.82	30.84	272.98
MW-14	10/15/2018	303.82	32.14	271.68
MW-14	10/24/2019	303.82	33.08	270.74
MW-15	4/2/2012	312.40	39.92	272.48
MW-15	5/28/2013	312.44	39.55	272.89
MW-15	4/14/2014	312.44	39.97	272.47
MW-15	10/21/2014	312.44	40.31	272.13
MW-15	12/9/2015	312.44	40.77	271.67
MW-15	12/13/2016	312.44	39.90	272.54
MW-15	3/13/2017	312.44	38.72	273.72
MW-15	7/17/2017	312.44	37.77	274.67
MW-15	10/20/2017	312.44	39.25	273.19
MW-15	1/24/2018	312.44	39.31	273.13
MW-15	4/17/2018	312.44	38.75	273.69
MW-15	7/18/2018	312.44	38.99	273.45
MW-15	10/15/2018	312.44	40.08	272.36
MW-15	10/24/2019	312.44	41.05	271.39
MW-16	5/28/2013	310.37	37.78	272.59
MW-16	10/21/2014	310.37	38.52	271.85
MW-16	12/9/2015	310.37	38.96	271.41
MW-16	12/13/2016	310.37	38.12	272.25
MW-16	3/13/2017	310.37	36.92	273.45
MW-16	7/17/2017	310.37	36.04	274.33
MW-16	10/20/2017	310.37	37.50	272.87
MW-16	1/24/2018	310.37	37.53	272.84
MW-16	4/17/2018	310.37	36.99	273.38
MW-16	7/18/2018	310.37	37.20	273.17
MW-16	10/15/2018	310.37	38.31	272.06
MW-16	10/24/2019	310.37	39.20	271.17
MW-17	3/6/2019	303.00	32.33	270.67
MW-17	10/24/2019	303.01	33.10	269.91
MW-17	6/3/2020	303.01	31.88	271.13
MW-17	12/10/2021	303.01	32.78	270.23
MW-18	3/6/2019	305.26	34.55	270.71
MW-18	10/24/2019	305.26	35.25	270.01
MW-18	12/10/2021	305.26	35.01	270.25
MW-19	10/24/2019	305.35	35.09	270.26
MW-19	12/4/2019	305.35	35.36	269.99

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-20	10/24/2019	305.51	35.22	270.29
MW-20	12/4/2019	305.51	35.49	270.02
MW-20	6/3/2020	305.51	34.02	271.49
MW-20	12/8/2021	305.51	34.98	270.53
DC-1	11/14/2000	312.46	40.29	272.17
DC-1	3/6/2001	312.46	41.11	271.35
DC-1	6/20/2001	312.46	41.46	271.00
DC-1	9/17/2001	312.46	41.78	270.68
DC-1	12/20/2001	312.46	41.43	271.03
DC-1	3/13/2002	312.46	39.75	272.71
DC-1	9/17/2002	312.46	39.75	272.71
DC-1	12/10/2002	312.46	40.69	271.77
DC-1	3/31/2003	312.46	40.33	272.13
DC-1	9/3/2003	312.46	40.69	271.77
DC-1	3/16/2004	312.46	39.77	272.69
DC-1	9/7/2004	312.46	40.57	271.89
DC-1	2/9/2005	312.46	41.31	271.15
DC-1	4/24/2007	312.46	38.29	274.17
DC-1	8/21/2008	312.72	40.93	271.79
DC-1	11/5/2010	312.72	40.64	272.08
DC-1	2/11/2011	312.72	39.37	273.35
DC-1	5/30/2011	312.72	37.91	274.81
DC-1	7/19/2011	312.72	38.21	274.51
DC-1	10/17/2011	312.72	39.37	273.35
DC-1	4/2/2012	312.72	39.72	273.00
DC-1	5/28/2013	312.82	39.30	273.52
DC-1	10/21/2014	312.82	40.05	272.77
DC-1	12/9/2015	312.82	40.51	272.31
DC-1	12/13/2016	312.82	39.63	273.19
DC-1	3/13/2017	312.82	38.46	274.36
DC-1	7/17/2017	312.82	37.40	275.42
DC-1	10/20/2017	312.82	39.26	273.56
DC-1	1/24/2018	312.82	39.02	273.80
DC-1	4/17/2018	312.82	38.43	274.39
DC-1	10/15/2018	312.82	39.80	273.02
DC-1	10/24/2019	312.82	40.84	271.98
DC-2	2/3/1999	312.80	39.04	273.76
DC-2	4/16/1999	312.80	36.90	275.90
DC-2	12/8/1999	312.80	39.88	272.92
DC-2	4/26/2000	312.80	39.11	273.69
DC-2	8/3/2000	312.80	39.85	272.95
DC-2	11/14/2000	312.80	41.04	271.76
DC-2	3/6/2001	312.80	41.82	270.98
DC-2	6/20/2001	312.80	42.18	270.62
DC-2	9/17/2001	312.80	42.50	270.30
DC-2	12/20/2001	312.80	42.12	270.68

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-2	3/13/2002	312.80	40.45	272.35
DC-2	6/13/2002	312.80	39.64	273.16
DC-2	9/17/2002	312.80	40.50	272.30
DC-2	12/10/2002	312.80	41.42	271.38
DC-2	3/31/2003	312.80	41.03	271.77
DC-2	9/3/2003	312.80	41.41	271.39
DC-2	3/16/2004	312.80	40.51	272.29
DC-2	9/7/2004	312.80	41.30	271.50
DC-2	2/9/2005	312.80	41.99	270.81
DC-2	4/24/2007	312.80	39.03	273.77
DC-2	8/21/2008	313.04	41.65	271.39
DC-2	11/5/2010	313.04	41.34	271.70
DC-2	2/11/2011	313.04	40.08	272.96
DC-2	5/30/2011	313.04	38.67	274.37
DC-2	7/19/2011	313.04	38.98	274.06
DC-2	10/17/2011	313.04	40.08	272.96
DC-2	4/2/2012	313.04	40.41	272.63
DC-2	10/21/2014	312.92	40.78	272.14
DC-2	12/9/2015	312.92	41.22	271.70
DC-2	12/13/2016	312.92	40.36	272.56
DC-2	3/13/2017	312.92	39.19	273.73
DC-2	7/17/2017	312.92	38.20	274.72
DC-2	10/20/2017	312.92	39.71	273.21
DC-2	1/24/2018	312.92	39.76	273.16
DC-2	4/17/2018	312.92	39.20	273.72
DC-2	7/18/2018	312.92	39.42	273.50
DC-2	10/15/2018	312.92	40.53	272.39
DC-2	10/24/2019	312.92	41.53	271.39
DC-3	10/21/1998	312.98	39.68	273.30
DC-3	2/3/1999	312.98	39.22	273.76
DC-3	4/16/1999	312.98	37.13	275.85
DC-3	12/8/1999	312.98	40.10	272.88
DC-3	4/26/2000	312.98	39.33	273.65
DC-3	8/3/2000	312.98	40.08	272.90
DC-3	11/14/2000	312.98	41.27	271.71
DC-3	3/6/2001	312.98	42.05	270.93
DC-3	6/20/2001	312.98	42.37	270.61
DC-3	9/17/2001	312.98	42.73	270.25
DC-3	12/20/2001	312.98	42.30	270.68
DC-3	3/13/2002	312.98	40.66	272.32
DC-3	6/13/2002	312.98	39.87	273.11
DC-3	9/17/2002	312.98	40.75	272.23
DC-3	12/10/2002	312.98	41.65	271.33
DC-3	3/31/2003	312.98	41.25	271.73
DC-3	9/3/2003	312.98	41.65	271.33
DC-3	3/16/2004	312.98	40.71	272.27
DC-3	9/7/2004	312.98	41.54	271.44

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-3	2/9/2005	312.98	42.21	270.77
DC-3	4/24/2007	312.98	39.26	273.72
DC-3	8/21/2008	313.23	41.89	271.34
DC-3	11/5/2010	313.23	41.58	271.65
DC-3	2/11/2011	313.23	40.30	272.93
DC-3	5/30/2011	313.23	38.89	274.34
DC-3	7/19/2011	313.23	39.22	274.01
DC-3	10/17/2011	313.23	40.34	272.89
DC-3	4/2/2012	313.23	40.62	272.61
DC-3	10/21/2014	313.11	41.07	272.04
DC-3	12/9/2015	313.11	41.47	271.64
DC-3	12/13/2016	313.11	40.59	272.52
DC-3	3/13/2017	313.11	39.39	273.72
DC-3	7/17/2017	313.11	38.44	274.67
DC-3	10/20/2017	313.11	39.94	273.17
DC-3	1/24/2018	313.11	39.98	273.13
DC-3	4/17/2018	313.11	39.47	273.64
DC-3	7/18/2018	313.11	39.67	273.44
DC-3	10/15/2018	313.11	40.80	272.31
DC-3	10/24/2019	313.11	41.78	271.33
DC-4	10/21/1998	312.20	39.96	272.24
DC-4	2/3/1999	312.20	38.37	273.83
DC-4	4/16/1999	312.20	36.34	275.86
DC-4	12/8/1999	312.20	39.32	272.88
DC-4	4/26/2000	312.20	38.55	273.65
DC-4	8/3/2000	312.20	39.33	272.87
DC-4	11/14/2000	312.20	40.52	271.68
DC-4	3/6/2001	312.20	41.29	270.91
DC-4	6/20/2001	312.20	41.60	270.60
DC-4	9/17/2001	312.20	41.89	270.31
DC-4	12/20/2001	312.20	41.49	270.71
DC-4	3/13/2002	312.20	39.86	272.34
DC-4	6/13/2002	312.20	39.11	273.09
DC-4	9/17/2002	312.20	40.00	272.20
DC-4	12/10/2002	312.20	40.92	271.28
DC-4	3/31/2003	312.20	40.44	271.76
DC-4	9/3/2003	312.20	40.88	271.32
DC-4	3/16/2004	312.20	39.94	272.26
DC-4	9/7/2004	312.20	40.81	271.39
DC-4	2/9/2005	312.20	41.42	270.78
DC-4	4/24/2007	312.20	38.50	273.70
DC-4	8/21/2008	312.12	41.13	270.99
DC-4	11/5/2010	312.12	40.81	271.31
DC-4	2/11/2011	312.12	39.51	272.61
DC-4	5/30/2011	312.12	38.13	273.99
DC-4	7/19/2011	312.12	38.48	273.64
DC-4	10/17/2011	312.12	39.57	272.55

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-4	4/2/2012	312.12	38.82	273.30
DC-4	5/28/2013	312.56	39.50	273.06
DC-4	10/21/2014	312.35	40.34	272.01
DC-4	12/9/2015	312.35	40.34	272.01
DC-4	12/13/2016	312.35	39.84	272.51
DC-4	3/13/2017	312.35	38.59	273.76
DC-4	7/17/2017	312.35	37.70	274.65
DC-4	10/20/2017	312.35	39.50	272.85
DC-4	1/24/2018	312.35	39.21	273.14
DC-4	4/18/2018	312.35	38.61	273.74
DC-4	7/18/2018	312.35	38.95	273.40
DC-4	10/15/2018	312.35	40.16	272.19
DC-4	10/24/2019	312.35	41.05	271.30
DC-4	12/7/2021	312.35	40.76	271.59
DC-5	2/3/1999	305.86	32.48	273.38
DC-5	4/16/1999	305.86	30.46	275.40
DC-5	4/11/2006	305.86	33.74	272.12
DC-5	4/24/2007	306.10	32.56	273.54
DC-5	8/21/2008	306.10	35.15	270.95
DC-5	11/5/2010	306.10	34.86	271.24
DC-5	2/11/2011	306.10	33.59	272.51
DC-5	5/30/2011	306.10	32.23	273.87
DC-5	7/19/2011	306.10	32.58	273.52
DC-5	10/17/2011	306.10	33.65	272.45
DC-5	4/2/2012	306.10	33.86	272.24
DC-5	5/28/2013	306.25	33.60	272.65
DC-5	10/15/2018	306.25	34.15	272.10
DC-6	2/3/1999	308.46	35.03	273.43
DC-6	4/16/1999	308.46	32.92	275.54
DC-7	2/3/1999	302.50	29.89	272.61
DC-7	4/16/1999	302.50	28.05	274.45
DC-7	12/8/1999	302.50	30.76	271.74
DC-7	4/26/2000	302.50	30.12	272.38
DC-7	8/3/2000	302.50	30.84	271.66
DC-7	11/14/2000	302.50	31.90	270.60
DC-7	3/6/2001	302.50	32.60	269.90
DC-7	6/20/2001	302.50	32.91	269.59
DC-7	9/17/2001	302.50	33.25	269.25
DC-7	12/20/2001	302.50	32.75	269.75
DC-7	3/13/2002	302.50	31.22	271.28
DC-7	6/13/2002	302.50	30.57	271.93
DC-7	9/17/2002	302.50	31.44	271.06
DC-7	12/10/2002	302.50	32.27	270.23
DC-7	3/31/2003	302.50	31.78	270.72
DC-7	9/3/2003	302.50	32.26	270.24

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-7	2/9/2005	302.50	32.67	269.83
DC-7	4/11/2006	302.50	31.05	271.45
DC-7	10/26/2006	302.50	32.58	269.92
DC-7	4/24/2007	302.50	29.96	272.54
DC-7	8/21/2008	302.78	32.48	270.30
DC-7	11/5/2010	302.78	32.15	270.63
DC-7	2/11/2011	302.78	30.91	271.87
DC-7	5/30/2011	302.78	29.68	273.10
DC-7	7/19/2011	302.78	30.03	272.75
DC-7	10/17/2011	302.78	31.04	271.74
DC-7	4/2/2012	302.78	31.12	271.66
DC-7	5/28/2013	302.88	30.94	271.94
DC-7	10/21/2014	302.61	31.71	270.90
DC-7	12/16/2015	302.61	31.79	270.82
DC-7	12/13/2016	302.61	31.19	271.42
DC-7	3/13/2017	302.61	30.03	272.58
DC-7	7/17/2017	302.61	29.37	273.24
DC-7	10/20/2017	302.61	30.51	272.10
DC-7	1/24/2018	302.61	30.69	271.92
DC-7	4/17/2018	302.61	30.19	272.42
DC-7	7/18/2018	302.61	30.48	272.13
DC-7	10/15/2018	302.61	31.52	271.09
DC-7	10/24/2019	302.61	32.42	270.19
DC-7	5/11/2021	302.61	31.15	271.46
DC-7	12/8/2021	302.61	32.07	270.54
DC-8	2/3/1999	306.09	33.45	272.64
DC-8	4/16/1999	306.09	31.43	274.66
DC-8	12/8/1999	306.09	34.27	271.82
DC-8	4/26/2000	306.09	33.55	272.54
DC-8	8/3/2000	306.09	34.26	271.83
DC-8	11/14/2000	306.09	35.37	270.72
DC-8	3/6/2001	306.09	36.11	269.98
DC-8	6/20/2001	306.09	36.45	269.64
DC-8	9/17/2001	306.09	36.75	269.34
DC-8	12/20/2001	306.09	36.40	269.69
DC-8	3/13/2002	306.09	34.82	271.27
DC-8	6/13/2002	306.09	34.05	272.04
DC-8	9/17/2002	306.09	34.85	271.24
DC-8	12/10/2002	306.09	35.74	270.35
DC-8	3/31/2003	306.09	35.71	270.38
DC-8	9/3/2003	306.09	35.73	270.36
DC-8	2/9/2005	306.09	36.26	269.83
DC-8	4/11/2006	306.09	34.60	271.49
DC-8	10/26/2006	306.09	36.00	270.09
DC-8	4/24/2007	306.11	33.47	272.64
DC-8	11/5/2010	306.38	35.69	270.69
DC-8	2/11/2011	306.38	34.49	271.89

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-8	5/30/2011	306.38	33.15	273.23
DC-8	7/19/2011	306.38	33.46	272.92
DC-8	10/17/2011	306.38	34.51	271.87
DC-8	4/2/2012	306.38	34.77	271.61
DC-8	5/28/2013	306.46	34.45	272.01
DC-8	10/21/2014	306.46	35.17	271.29
DC-8	12/9/2015	306.23	35.58	270.65
DC-8	12/13/2016	306.23	34.71	271.52
DC-8	3/13/2017	306.23	33.65	272.58
DC-8	7/17/2017	306.23	32.75	273.48
DC-8	10/20/2017	306.23	34.14	272.09
DC-8	1/24/2018	306.23	34.21	272.02
DC-8	4/17/2018	306.23	33.64	272.59
DC-8	7/18/2018	306.23	33.92	272.31
DC-8	10/15/2018	306.23	34.94	271.29
DC-8	10/29/2019	306.23	36.03	270.20
DC-8	12/8/2021	306.23	35.69	270.54
DC-9A	4/16/1999	307.76	32.19	275.57
DC-9A	12/8/1999	307.76	35.03	272.73
DC-9A	4/26/2000	307.76	34.35	273.41
DC-9A	8/3/2000	307.76	35.11	272.65
DC-9A	11/14/2000	307.76	36.30	271.46
DC-9A	4/11/2006	307.76	35.45	272.31
DC-9A	8/8/2006	307.76	36.25	271.51
DC-9A	11/2/2006	307.76	36.90	270.86
DC-9A	4/24/2007	307.75	34.30	273.45
DC-9A	8/21/2008	308.02	36.92	271.10
DC-9B	4/16/1999	307.91	32.34	275.57
DC-9B	3/6/2001	307.91	37.22	270.69
DC-9B	6/20/2001	307.91	37.52	270.39
DC-9B	9/17/2001	307.91	37.87	270.04
DC-9B	12/20/2001	307.91	37.45	270.46
DC-9B	4/11/2006	307.91	35.65	272.26
DC-9B	8/8/2006	307.91	36.40	271.51
DC-9B	10/26/2006	307.91	37.15	270.76
DC-9B	4/24/2007	307.94	34.45	273.49
DC-9B	8/21/2008	308.16	37.05	271.11
DC-10A	4/16/1999	307.59	31.85	275.74
DC-10A	12/8/1999	307.59	34.82	272.77
DC-10A	4/26/2000	307.59	34.05	273.54
DC-10A	8/3/2000	307.59	34.86	272.73
DC-10A	11/14/2000	307.59	36.05	271.54
DC-10A	2/11/2011	307.72	34.99	272.73
DC-10A	5/30/2011	307.72	33.65	274.07
DC-10A	7/19/2011	307.72	34.07	273.65

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-10A	10/17/2011	307.72	35.12	272.60
DC-10A	4/2/2012	307.72	35.23	272.49
DC-10A	5/28/2013	307.93	35.04	272.89
DC-10A	10/21/2014	307.73	35.83	271.90
DC-10A	12/9/2015	307.73	36.19	271.54
DC-10A	12/13/2016	307.73	35.35	272.38
DC-10A	3/13/2017	307.73	34.09	273.64
DC-10A	7/17/2017	307.73	33.29	274.44
DC-10A	10/20/2017	307.73	34.79	272.94
DC-10A	1/24/2018	307.73	34.72	273.01
DC-10A	4/17/2018	307.73	34.23	273.50
DC-10A	4/17/2018	307.73	34.23	273.50
DC-10A	7/18/2018	307.73	34.50	273.23
DC-10A	10/15/2018	307.73	36.12	271.61
DC-10A	10/24/2019	307.73	36.48	271.25
DC-10A	12/7/2021	307.73	36.26	271.47
DC-10B	4/16/1999	307.66	31.92	275.74
DC-10B	3/6/2001	307.66	36.89	270.77
DC-10B	6/20/2001	307.66	37.46	270.20
DC-10B	9/17/2001	307.66	37.55	270.11
DC-10B	12/20/2001	307.66	37.03	270.63
DC-10B	2/9/2005	307.66	36.98	270.68
DC-10B	4/11/2006	307.66	35.24	272.42
DC-10B	4/24/2007	307.66	34.08	273.58
DC-10B	8/21/2008	307.89	36.74	271.15
DC-10B	11/5/2010	307.89	36.40	271.49
DC-10B	2/11/2011	307.89	35.06	272.83
DC-10B	5/30/2011	307.89	33.72	274.17
DC-10B	7/19/2011	307.89	34.09	273.80
DC-10B	10/17/2011	307.89	35.15	272.74
DC-10B	4/2/2012	307.89	35.34	272.55
DC-10B	12/13/2016	307.89	35.45	272.44
DC-10B	10/15/2018	307.89	35.70	272.19
DC-11	4/24/2007	311.02	37.29	273.73
DC-11	11/5/2010	311.02	39.59	271.43
DC-11	2/11/2011	311.02	38.36	272.66
DC-11	5/30/2011	311.02	36.91	274.11
DC-11	4/2/2012	311.02	38.67	272.35
DC-11	4/14/2014	311.25	38.73	272.52
DC-11	10/21/2014	311.25	39.00	272.25
DC-11	12/9/2015	311.25	39.48	271.77
DC-11	12/13/2016	311.25	38.56	272.69
DC-11	3/13/2017	311.25	37.49	273.76
DC-11	7/17/2017	311.25	36.43	274.82
DC-11	10/20/2017	311.25	37.66	273.59
DC-11	1/24/2018	311.25	38.00	273.25

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-11	4/17/2018	311.25	37.40	273.85
DC-11	7/18/2018	311.25	37.63	273.62
DC-11	10/15/2018	311.25	38.74	272.51
DC-11	10/24/2019	311.25	39.73	271.52
DC-12	4/24/2007	310.90	37.54	273.36
DC-12	8/21/2008	310.90	40.05	270.85
DC-12	11/5/2010	310.90	39.79	271.11
DC-12	2/11/2011	310.90	38.60	272.30
DC-12	5/30/2011	310.90	37.17	273.73
DC-12	7/19/2011	310.90	37.45	273.45
DC-12	10/17/2011	310.90	38.54	272.36
DC-12	4/2/2012	310.90	38.91	271.99
DC-12	5/28/2013	311.25	38.50	272.75
DC-12	4/14/2014	311.25	38.93	272.32
DC-12	10/27/2014	311.25	39.23	272.02
DC-12	12/9/2015	311.25	39.70	271.55
DC-12	12/13/2016	311.25	38.80	272.45
DC-12	3/13/2017	311.25	37.72	273.53
DC-12	7/17/2017	311.25	36.71	274.54
DC-12	10/20/2017	311.25	38.20	273.05
DC-12	1/24/2018	311.25	38.24	273.01
DC-12	4/17/2018	311.25	37.67	273.58
DC-12	7/19/2018	311.25	37.90	273.35
DC-12	10/15/2018	311.25	38.94	272.31
DC-12	10/25/2019	311.25	39.95	271.30
DC-13	4/24/2007	310.85	36.64	274.21
DC-13	8/21/2008	310.85	39.13	271.72
DC-13	11/5/2010	310.85	38.88	271.97
DC-13	2/11/2011	310.85	37.68	273.17
DC-13	5/30/2011	310.85	36.28	274.57
DC-13	7/19/2011	310.85	36.57	274.28
DC-13	10/17/2011	310.85	37.65	273.20
DC-13	4/2/2012	310.85	38.01	272.84
DC-13	5/28/2013	310.20	37.61	272.59
DC-13	4/14/2014	310.20	38.02	272.18
DC-13	10/27/2014	310.20	38.37	271.83
DC-13	12/9/2015	310.20	38.37	271.83
DC-13	12/13/2016	310.20	37.89	272.31
DC-13	3/13/2017	310.20	36.82	273.38
DC-13	7/17/2017	310.20	37.82	272.38
DC-13	10/20/2017	310.20	37.26	272.94
DC-13	1/24/2018	310.20	37.33	272.87
DC-13	4/17/2018	310.20	36.77	273.43
DC-13	7/18/2018	310.20	36.97	273.23
DC-13	10/15/2018	310.20	38.06	272.14
DC-13	10/24/2019	310.20	39.05	271.15

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-14	4/24/2007	308.60	36.15	272.45
DC-14	8/21/2008	308.60	38.59	270.01
DC-14	11/5/2010	308.60	38.34	270.26
DC-14	2/11/2011	308.60	37.18	271.42
DC-14	5/30/2011	308.60	35.83	272.77
DC-14	7/19/2011	308.60	36.12	272.48
DC-14	10/17/2011	308.60	37.14	271.46
DC-14	4/2/2012	308.60	37.49	271.11
DC-14	5/28/2013	308.94	37.10	271.84
DC-14	10/21/2014	308.94	37.77	271.17
DC-14	12/9/2015	308.94	38.23	270.71
DC-14	12/13/2016	308.94	37.40	271.54
DC-14	3/13/2017	308.94	36.38	272.56
DC-14	7/17/2017	308.94	35.40	273.54
DC-14	10/20/2017	308.94	36.78	272.16
DC-14	1/24/2018	308.94	36.84	272.10
DC-14	4/17/2018	308.94	36.31	272.63
DC-14	7/18/2018	308.94	36.51	272.43
DC-14	10/15/2018	308.94	Well Missing	Decomissioned 3/2019
DC-15	4/24/2007	307.54	34.64	272.90
DC-15	11/5/2010	307.54	36.93	270.61
DC-15	2/11/2011	307.54	35.68	271.86
DC-15	5/30/2011	307.54	34.32	273.22
DC-15	7/19/2011	307.54	34.62	272.92
DC-15	10/17/2011	307.54	35.68	271.86
DC-15	4/2/2012	307.54	35.94	271.60
DC-15	5/28/2013	307.89	35.61	272.28
DC-15	4/14/2014	307.89	36.02	271.87
DC-15	10/21/2014	307.89	36.35	271.54
DC-15	12/9/2015	307.89	36.79	271.10
DC-15	12/13/2016	307.89	35.91	271.98
DC-15	3/13/2017	307.89	34.82	273.07
DC-15	7/17/2017	307.89	33.91	273.98
DC-15	10/20/2017	307.89	34.31	273.58
DC-15	1/24/2018	307.89	35.40	272.49
DC-15	4/17/2018	307.89	34.81	273.08
DC-15	7/18/2018	307.89	35.08	272.81
DC-15	10/16/2018	307.89	36.12	271.77
DC-15	10/24/2019	307.89	37.10	270.79
DC-15	12/8/2021	307.89	36.90	270.99
DC-16	4/24/2007	307.12	33.81	273.31
DC-16	8/21/2008	307.12	36.41	270.71
DC-16	11/5/2010	307.12	36.10	271.02
DC-16	2/11/2011	307.12	34.85	272.27
DC-16	5/30/2011	307.12	33.48	273.64

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-16	7/19/2011	307.12	33.83	273.29
DC-16	10/17/2011	307.12	34.91	272.21
DC-16	4/2/2012	307.12	35.14	271.98
DC-16	12/13/2016	307.12	35.15	271.97
DC-16	3/13/2017	307.12	34.80	272.32
DC-16	10/15/2018	307.12	35.37	271.75
DC-17	4/24/2007	304.89	31.65	273.24
DC-17	5/28/2013	305.16	32.65	272.51
DC-17	10/21/2014	305.16	33.44	271.72
DC-17	12/16/2015	305.16	33.58	271.58
DC-17	3/13/2017	305.16	31.80	273.36
DC-17	7/17/2017	305.16	--	--
DC-17	10/20/2017	305.16	32.51	272.65
DC-17	1/24/2018	305.16	32.42	272.74
DC-17	4/17/2018	305.16	31.94	273.22
DC-17	7/18/2018	305.16	32.18	272.98
DC-17	10/15/2018	305.16	33.24	271.92
DC-17	5/21/2019	305.16	33.21	271.95
DC-17	10/24/2019	305.16	34.20	270.96
DC-17	12/8/2021	305.16	33.98	271.18
DC-18	4/24/2007	309.37	36.10	273.27
DC-18	5/28/2013	309.64	37.05	272.59
DC-18	10/21/2014	309.51	37.81	271.70
DC-18	12/9/2015	309.51	38.26	271.25
DC-18	12/13/2016	309.51	37.35	272.16
DC-18	3/13/2017	309.51	36.26	273.25
DC-18	7/17/2017	309.51	35.28	274.23
DC-18	10/20/2017	309.51	36.73	272.78
DC-18	1/24/2018	309.51	36.81	272.70
DC-18	4/17/2018	309.51	36.24	273.27
DC-18	7/18/2018	309.51	36.46	273.05
DC-18	10/15/2018	309.51	37.54	271.97
DC-18	10/24/2019	309.51	38.52	270.99
DC-18	12/7/2021	309.51	38.36	271.15
DC-19	8/21/2008	313.53	42.02	271.51
DC-19	11/5/2010	313.53	41.75	271.78
DC-19	2/11/2011	313.53	40.52	273.01
DC-19	5/30/2011	313.53	39.06	274.47
DC-19	7/19/2011	313.53	39.36	274.17
DC-19	10/17/2011	313.53	40.47	273.06
DC-19	4/2/2012	313.53	40.85	272.68
DC-19	5/28/2013	313.62	40.40	273.22
DC-19	12/9/2015	313.62	41.66	271.96
DC-19	12/13/2016	313.62	40.73	272.89
DC-19	3/13/2017	313.62	39.65	273.97

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-19	7/17/2017	313.62	38.57	275.05
DC-19	10/20/2017	313.62	40.07	273.55
DC-19	1/24/2018	313.62	40.16	273.46
DC-19	4/17/2018	313.62	39.57	274.05
DC-19	7/18/2018	313.62	39.78	273.84
DC-19	10/15/2018	313.62	40.90	272.72
DC-19	10/29/2019	313.62	42.03	271.59
DC-20	6/2/2008	--	39.46	--
DC-20	5/28/2013	310.92	38.42	272.50
DC-20	4/14/2014	310.92	38.86	272.06
DC-20	10/21/2014	310.92	39.12	271.80
DC-20	12/15/2015	310.92	39.44	271.48
DC-20	12/13/2016	310.92	38.69	272.23
DC-20	3/13/2017	310.92	37.65	273.27
DC-20	7/17/2017	310.92	36.64	274.28
DC-20	10/20/2017	310.92	38.08	272.84
DC-20	1/24/2018	310.92	38.17	272.75
DC-20	4/17/2018	310.92	37.59	273.33
DC-20	10/15/2018	310.92	38.87	272.05
DC-20	10/25/2019	310.92	39.85	271.07
DC-20	12/7/2021	310.92	39.71	271.21
KMW-1	4/24/2007	311.21	38.15	273.06
KMW-1	8/21/2008	311.21	40.60	270.61
KMW-1	11/5/2010	311.21	40.37	270.84
KMW-1	2/11/2011	311.21	39.19	272.02
KMW-1	5/30/2011	311.21	37.79	273.42
KMW-1	7/19/2011	311.21	38.06	273.15
KMW-1	10/17/2011	311.21	39.13	272.08
KMW-1	4/2/2012	311.21	39.50	271.71
KMW-1	5/28/2013	311.59	39.08	272.51
KMW-1	10/21/2014	311.59	39.81	271.78
KMW-1	12/9/2015	311.59	40.29	271.30
KMW-1	12/13/2016	311.59	39.36	272.23
KMW-1	3/13/2017	311.59	38.34	273.25
KMW-1	7/17/2017	311.59	37.31	274.28
KMW-1	10/20/2017	311.59	38.85	272.74
KMW-1	1/24/2018	311.59	38.83	272.76
KMW-1	4/17/2018	311.59	38.27	273.32
KMW-1	7/18/2018	311.59	38.47	273.12
KMW-1	10/15/2018	311.59	39.55	272.04
KMW-1	10/24/2019	311.59	40.55	271.04
KMW-2	4/24/2007	306.90	33.33	273.57
KMW-2	8/21/2008	306.90	35.96	270.94
KMW-2	11/5/2010	306.90	34.59	272.31
KMW-2	2/11/2011	306.90	34.32	272.58

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
KMW-2	5/30/2011	306.90	32.96	273.94
KMW-2	7/19/2011	306.90	33.30	273.60
KMW-2	10/17/2011	306.90	34.39	272.51
KMW-2	4/2/2012	306.90	34.59	272.31
KMW-2	5/28/2013	307.25	34.30	272.95
KMW-2	10/21/2014	307.04	35.14	271.90
KMW-2	12/9/2015	307.04	35.51	271.53
KMW-2	12/13/2016	307.04	34.70	272.34
KMW-2	3/13/2017	307.04	33.42	273.62
KMW-2	7/17/2017	307.04	32.60	274.44
KMW-2	10/20/2017	307.04	34.02	273.02
KMW-2	1/24/2018	307.04	34.11	272.93
KMW-2	4/17/2018	307.04	33.56	273.48
KMW-2	7/18/2018	307.04	33.80	273.24
KMW-2	10/15/2018	307.04	34.92	272.12
KMW-2	10/24/2019	307.04	35.90	271.14
KMW-2	12/7/2021	307.04	35.61	271.43
KMW-3	4/24/2007	296.92	24.51	272.41
KMW-3	8/21/2008	296.92	27.01	269.91
KMW-3	11/5/2010	296.92	26.37	270.55
KMW-3	5/30/2011	296.92	24.22	272.70
KMW-3	7/19/2011	296.92	24.61	272.31
KMW-3	10/17/2011	296.92	25.58	271.34
KMW-3	4/2/2012	296.92	25.59	271.33
KMW-3	10/21/2014	296.92	26.25	270.67
KMW-3	12/13/2016	296.92	25.69	271.23
KMW-3	3/13/2017	296.92	24.33	272.59
KMW-3	7/17/2017	296.92	23.99	272.93
KMW-3	10/20/2017	296.92	25.35	271.57
KMW-3	1/24/2018	296.92	25.16	271.76
KMW-3	4/17/2018	296.92	24.69	272.23
KMW-3	7/18/2018	296.92	25.04	271.88
KMW-3	10/15/2018	296.92	26.09	270.83
KMW-3	10/25/2019	296.99	26.96	270.03
KMW-3	12/9/2021	296.99	26.53	270.46
KMW-4	4/24/2007	299.45	25.95	273.50
KMW-4	8/21/2008	299.45	28.62	270.83
KMW-4	11/5/2010	299.45	28.22	271.23
KMW-4	2/11/2011	299.45	26.87	272.58
KMW-4	5/30/2011	299.45	25.59	273.86
KMW-4	7/19/2011	299.45	25.99	273.46
KMW-4	10/17/2011	299.45	27.07	272.38
KMW-4	4/2/2012	299.45	27.10	272.35
KMW-4	10/21/2014	299.57	27.80	271.77
KMW-4	12/9/2015	299.57	28.08	271.49
KMW-4	12/13/2016	299.57	27.24	272.33

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
KMW-4	3/13/2017	299.57	25.90	273.67
KMW-4	7/17/2017	299.57	25.25	274.32
KMW-4	10/20/2017	299.57	27.26	272.31
KMW-4	1/24/2018	299.57	26.58	272.99
KMW-4	4/17/2018	299.57	26.13	273.44
KMW-4	7/18/2018	299.57	26.50	273.07
KMW-4	10/15/2018	299.57	27.60	271.97
KMW-4	10/25/2019	299.57	28.57	271.00
KMW-5	4/24/2007	297.10	24.32	272.78
KMW-5	8/21/2008	297.10	26.85	270.25
KMW-5	11/5/2010	297.10	26.49	270.61
KMW-5	2/11/2011	297.10	25.21	271.89
KMW-5	5/30/2011	297.10	24.00	273.10
KMW-5	7/19/2011	297.10	24.41	272.69
KMW-5	10/17/2011	297.10	25.41	271.69
KMW-5	4/2/2012	297.10	25.37	271.73
KMW-5	5/28/2013	297.22	25.30	271.92
KMW-5	10/21/2014	297.22	26.09	271.13
KMW-5	12/9/2015	297.22	26.30	270.92
KMW-5	12/13/2016	297.22	25.52	271.70
KMW-5	3/13/2017	297.22	24.30	272.92
KMW-5	7/17/2017	297.22	24.75	272.47
KMW-5	10/20/2017	297.22	24.82	272.40
KMW-5	1/24/2018	297.22	24.95	272.27
KMW-5	4/17/2018	297.22	24.50	272.72
KMW-5	7/18/2018	297.22	24.87	272.35
KMW-5	10/31/2018	297.22	26.09	271.13
KMW-5	10/25/2019	297.22	27.15	270.07
KMW-5D	4/24/2007	296.94	24.19	272.75
KMW-5D	8/21/2008	296.94	26.72	270.22
KMW-5D	11/5/2010	296.94	26.35	270.59
KMW-5D	2/11/2011	296.94	25.10	271.84
KMW-5D	5/30/2011	296.94	23.89	273.05
KMW-5D	7/19/2011	296.94	24.28	272.66
KMW-5D	10/17/2011	296.94	25.28	271.66
KMW-5D	4/2/2012	296.94	25.19	271.75
KMW-5D	12/13/2016	296.94	25.40	271.54
KMW-5D	3/13/2017	296.94	25.19	271.75
KMW-5D	10/15/2018	296.94	25.79	271.15
KMW-6	4/24/2007	294.70	22.40	272.30
KMW-6	8/21/2008	294.70	24.90	269.80
KMW-6	11/5/2010	294.70	24.51	270.19
KMW-6	2/11/2011	294.70	23.26	271.44
KMW-6	5/30/2011	294.70	22.12	272.58
KMW-6	7/19/2011	294.70	22.52	272.18

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
KMW-6	10/17/2011	294.70	23.48	271.22
KMW-6	4/2/2012	294.70	23.39	271.31
KMW-6	10/21/2014	294.81	21.05	273.76
KMW-6	12/9/2015	294.81	24.31	270.50
KMW-6	12/13/2016	294.81	23.53	271.28
KMW-6	3/13/2017	294.81	22.34	272.47
KMW-6	7/17/2017	294.81	21.90	272.91
KMW-6	10/20/2017	294.81	23.31	271.50
KMW-6	1/24/2018	294.81	23.30	271.51
KMW-6	4/17/2018	294.81	22.54	272.27
KMW-6	7/18/2018	294.81	22.98	271.83
KMW-6	10/15/2018	294.81	23.98	270.83
KMW-6	10/28/2019	294.80	24.80	270.00
KMW-7	4/24/2007	301.32	29.22	272.10
KMW-7	8/21/2008	301.32	31.65	269.67
KMW-7	11/5/2010	301.32	31.36	269.96
KMW-7	2/11/2011	301.32	30.14	271.18
KMW-7	5/30/2011	301.32	28.92	272.40
KMW-7	7/19/2011	301.32	29.27	272.05
KMW-7	10/17/2011	301.32	30.25	271.07
KMW-7	4/2/2012	301.32	30.35	270.97
KMW-7	10/21/2014	301.43	30.88	270.55
KMW-7	12/15/2015	301.43	31.03	270.40
KMW-7	12/13/2016	301.43	30.40	271.03
KMW-7	3/13/2017	301.43	28.98	272.45
KMW-7	7/17/2017	301.43	28.61	272.82
KMW-7	10/20/2017	301.43	30.19	271.24
KMW-7	1/24/2018	301.43	28.66	272.77
KMW-7	4/17/2018	301.43	29.28	272.15
KMW-7	7/18/2018	301.43	29.70	271.73
KMW-7	10/15/2018	301.43	30.87	270.56
KMW-7	10/29/2019	301.42	31.71	269.71
KMW-7	12/10/2021	301.42	31.25	270.17
KMW-8	4/24/2007	308.08	35.73	272.35
KMW-8	8/21/2008	308.08	38.14	269.94
KMW-8	11/5/2010	308.08	37.87	270.21
KMW-8	2/11/2011	308.08	36.72	271.36
KMW-8	5/30/2011	308.08	35.40	272.68
KMW-8	7/19/2011	308.08	35.68	272.40
KMW-8	10/17/2011	308.08	36.71	271.37
KMW-8	4/2/2012	308.08	37.02	271.06
KMW-8	10/21/2014	308.15	37.34	270.81
KMW-8	12/9/2015	308.15	37.76	270.39
KMW-8	12/13/2016	308.15	36.92	271.23
KMW-8	3/13/2017	308.15	35.94	272.21
KMW-8	7/17/2017	308.15	34.98	273.17

Table C2
Historical Summary of Groundwater Elevations (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
KMW-8	10/20/2017	308.15	36.35	271.80
KMW-8	1/24/2018	308.15	36.41	271.74
KMW-8	4/17/2018	308.15	35.87	272.28
KMW-8	7/18/2018	308.15	36.10	272.05
KMW-8	10/15/2018	308.15	37.12	271.03
KMW-8	10/28/2019	308.16	38.06	270.10
KMW-8	12/10/2021	308.16	37.85	270.31
KMW-9	4/24/2007	310.18	36.49	273.69
KMW-9	11/5/2010	310.18	38.78	271.40
KMW-9	2/11/2011	310.18	37.51	272.67
KMW-9	5/30/2011	310.18	36.11	274.07
KMW-9	7/19/2011	310.18	36.49	273.69
KMW-9	10/17/2011	310.18	37.51	272.67
KMW-9	4/2/2012	310.18	37.84	272.34
KMW-9	4/14/2014	310.53	37.91	272.62
KMW-9	10/21/2014	310.33	38.24	272.09
KMW-9	12/9/2015	310.33	38.71	271.62
KMW-9	12/13/2016	310.33	37.79	272.54
KMW-9	3/13/2017	310.33	36.65	273.68
KMW-9	7/17/2017	310.33	35.66	274.67
KMW-9	10/20/2017	310.33	37.16	273.17
KMW-9	1/24/2018	310.33	37.22	273.11
KMW-9	4/17/2018	310.33	36.64	273.69
KMW-9	7/18/2018	310.33	36.87	273.46
KMW-9	10/15/2018	310.33	37.97	272.36
KMW-9	10/24/2019	310.33	39.00	271.33

NOTES:

1. '-- = not measured or not applicable.
2. Well monument types: flush grade monuments and above ground (AG) monuments.
3. Depth to water is measured from top of well casing.
4. Elevations are reported relative to North American Vertical Datum of 1988 (NAVD 88).
5. Top of casing (TOC) elevations were surveyed by D.R. Strong Consulting Engineers, Inc. in February and May 213 and by Lanktree Land Surveying, Inc. in July 215.

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)
Shallow Monitoring Wells			
MW-1	12/10/1999	**21.6**	
MW-1	7/25/2005	**15**	
MW-1	4/11/2006	**14**	
MW-1	10/26/2006	**11**	
MW-1	4/25/2007	**13**	
* Monitoring well cannot be located			
MW-2	12/10/1999	**16.7**	
MW-2	4/5/2012	**7.1**	
MW-2	5/30/2013	**2.4**	
MW-2	4/14/2014	**3.2**	
MW-2	10/24/2014	**1.4**	
MW-2	12/11/2015	1.00 U	
MW-2	3/13/2017	**6.02**	
MW-2	7/18/2017	**2.43**	
MW-2	10/26/2017	**1.55**	
MW-2	4/19/2018	**3.39**	
MW-2	7/17/2018	**1.78**	Chloroform (0.569)
MW-2	10/18/2018	**1.17**	Chloroform (0.843)
MW-2	10/25/2019	**1.20**	Chloroform (1.53)
MW-3	4/14/2008	**2.31**	Chloroform (0.990)
MW-3	11/1/2010	**2.9**	
MW-3	5/31/2011	2.0 U	
MW-3	7/20/2011	2.0 U	
MW-3	10/18/2011	**6.1**	
MW-3	4/4/2012	**5.8**	
MW-3	5/29/2013	**4.0**	
MW-3	10/24/2014	**1.0**	
MW-3	12/10/2015	**1.34**	
MW-3	12/14/2016	1.00 U	
MW-3	3/13/2017	1.00 U	
MW-3	7/18/2017	**1.76**	
MW-3	10/25/2017	**4.21**	
MW-3	4/20/2018	**1.00**	
MW-3	10/16/2018	0.500 U	
MW-4	4/14/2008	**33**	Chloroform (0.780), cis-1,2-DCE (0.320), TCE (0.490)
MW-4	3/9/2010	**7.8**	
MW-4	11/1/2010	**16**	
MW-4	5/31/2011	**10**	
MW-4	7/21/2011	**25**	
MW-4	10/19/2011	**21**	
MW-4	4/4/2012	**11**	
MW-4	5/29/2013	**8.1**	
MW-4	10/29/2014	**7.3**	
MW-4	12/14/2015	**4.89**	

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
MW-4	12/14/2016	1.00	U	
MW-4	3/14/2017	1.00	U	
MW-4	7/18/2017	**1.40**		
MW-4	10/25/2017	**3.23**		
MW-4	4/20/2018	0.500	U	
MW-4	10/16/2018	0.500	U	
MW-4	12/7/2021	**2.62**		
MW-5	4/11/2008	**0.470**		
MW-5	4/2/2012	2.0	U	
MW-6	4/15/2008	2.0	U	
MW-6	4/2/2012	2.0	U	
MW-7	4/16/2008	**22.4**		
MW-7	4/2/2012	**14**		
MW-7	10/29/2014	**20**		
MW-7	12/15/2015	**7.42**		
MW-7	3/17/2017	**8.08**		
MW-7	7/19/2017	**7.20**		
MW-7	10/25/2017	**7.47**		
MW-7	1/26/2018	**7.73**		
MW-7	4/20/2018	**7.64**		
MW-7	7/19/2018	**6.60**		
MW-7	10/23/2018	**5.79**		
MW-7	10/25/2019	**7.13**		
MW-7	12/7/2021	**8.20**		
MW-8	8/21/2008	**0.20**	J	
MW-8	4/2/2012	2.0	U	
MW-9	8/21/2008	**0.10**	J	
MW-9	4/2/2012	2.0	U	
MW-9	10/24/2014	1.0	U	
MW-9	12/10/2015	1.00	U	
MW-9	3/13/2017	1.00	U	
MW-9	10/23/2017	0.500	U	
MW-9	4/18/2018	0.500	U	
MW-9	10/17/2018	0.500	U	
MW-9	10/25/2019	0.500	U	
MW-9	12/9/2021	0.400	U	
MW-10	2/8/2011	**10**		
MW-10	5/31/2011	2.0	U	
MW-10	7/20/2011	**4.1**		
MW-10	10/18/2011	**4.9**		
MW-10	4/6/2012	**6.7**		
MW-10	5/29/2013	**4.1**		

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
MW-10	10/24/2014	**1.7**		
MW-10	12/11/2015	1.00	U	TCE (3.22)
MW-10	12/14/2016	**1.13**		
MW-10	3/14/2017	**1.09**		
MW-10	7/18/2017	1.00	U	
MW-10	10/23/2017	0.500	U	
MW-10	4/18/2018	**0.716**		
MW-10	10/18/2018	0.500	U	
MW-10	5/21/2019	**0.630**		
MW-10	10/25/2019	**1.01**		
MW-10	12/9/2021	**1.60**		
MW-11	2/8/2011	**47**		
MW-11	5/31/2011	2.0	U	Acetone (51)
MW-11	7/20/2011	2.0	U	Acetone (154)
MW-11	10/18/2011	2.0	U	Acetone (130)
MW-11	4/6/2012	**29**		
MW-11	5/31/2013	**22**		
MW-11	10/29/2014	**15**		
MW-11	12/14/2015	**11.9**		
MW-11	12/15/2016	**7.99**		
MW-11	3/16/2017	**4.66**		
MW-11	7/19/2017	**2.52**		
MW-11	10/26/2017	**2.15**		
MW-11	1/25/2018	**2.52**		
MW-11	4/19/2018	**2.97**		
MW-11	10/19/2018	**2.44**		
MW-11	5/21/2019	**3.92**		
MW-11	12/9/2021	**5.59**		
MW-12	4/4/2012	2.0	U	
MW-12	5/28/2013	1.0	U	
MW-12	10/23/2014	1.0	U	
MW-12	12/10/2015	1.00	U	
MW-12	12/14/2016	1.00	U	
MW-12	3/13/2017	1.00	U	
MW-12	7/18/2017	1.00	U	
MW-12	10/23/2017	0.500	U	
MW-12	4/18/2018	0.500	U	
MW-12	10/16/2018	0.500	U	
MW-13	4/3/2012	2.0	U	
MW-13	5/30/2013	1.0	U	
MW-13	10/23/2014	1.0	U	
MW-13	12/10/2015	1.00	U	
MW-13	12/13/2016	1.00	U	
MW-13	3/14/2017	1.00	U	
MW-13	7/18/2017	1.00	U	

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
MW-13	10/23/2017	0.500	U	
MW-13	4/18/2018	0.500	U	
MW-13	10/16/2018	0.500	U	
MW-14	4/5/2012	2.0	U	
MW-14	5/29/2013	1.0	U	
MW-14	10/30/2014	1.0	U	
MW-14	12/11/2015	1.00	U	
MW-14	3/14/2017	1.00	U	
MW-14	10/24/2017	**0.910**		
MW-14	4/20/2018	**1.27**		
MW-14	10/23/2018	0.500	U	
MW-15	4/5/2012	2.0	U	
MW-15	5/28/2013	1.0	U	
MW-15	4/14/2014	1.0	U	
MW-15	10/23/2014	1.0	U	
MW-15	12/10/2015	1.00	U	
MW-15	3/14/2017	1.00	U	
MW-15	10/24/2017	**0.954**		
MW-15	4/19/2018	**1.13**		
MW-15	10/18/2018	0.500	U	
MW-16	5/31/2013	**2.5**		
MW-16	10/23/2014	**1.3**		
MW-16	12/11/2015	**1.20**		
MW-16	12/13/2016	**1.63**		
MW-16	3/16/2017	**1.13**		
MW-16	7/18/2017	1.00	U	
MW-16	10/24/2017	**1.26**		
MW-16	4/19/2018	**1.33**		
MW-16	10/18/2018	**0.912**		Chloroform (0.539)
MW-17	3/6/2019	**6.82**		
MW-17	10/28/2019	**2.85**		
MW-17	6/3/2020	**5.35**		
MW-17	12/10/2021	**4.98**		
MW-18	3/6/2019	**11.4**		
MW-18	10/28/2019	**11.3**		
MW-18	12/10/2021	**9.8**		
MW-20	10/29/2019	0.500	U	Chloroform (0.547)
MW-20	12/4/2019	0.500	U	
MW-20	6/3/2020	1.00	U	
MW-20	12/8/2021	**0.423**		
DC-1	10/21/1998	**0.60**		Toluene (0.8)

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
DC-1	2/3/1999	0.5	U	
DC-1	4/7/1999	0.5	U	Toluene (8.7)
DC-1	12/8/1999	1.0	U	
DC-1	4/26/2000	1.0	U	
DC-1	8/3/2000	1.0	U	
DC-1	11/14/2000	1.0	U	
DC-1	3/6/2001	1.0	U	
DC-1	6/20/2001	1.0	U	
DC-1	9/17/2001	1.0	U	
DC-1	12/20/2001	1.0	U	
DC-1	3/13/2002	1.0	U	
DC-1	9/17/2002	1.0	U	
DC-1	12/10/2002	1.0	U	
DC-1	3/31/2003	1.0	U	
DC-1	9/3/2003	1.0	U	
DC-1	3/16/2004	1.0	U	
DC-1	9/7/2004	1.0	U	
DC-1	4/25/2007	0.2	U	
DC-1	4/4/2012	2.0	U	
DC-2	10/21/1998	**2.4**		Chloroform (1.8), Toluene (0.6)
DC-2	2/3/1999	**0.7**		
DC-2	4/7/1999	0.5	U	Chloroform (1.4), Toluene (14)
DC-2	12/8/1999	0.5	U	
DC-2	4/26/2000	1.0	U	
DC-2	8/3/2000	1.0	U	
DC-2	11/14/2000	1.0	U	
DC-2	3/6/2001	1.0	U	
DC-2	6/20/2001	1.0	U	
DC-2	9/17/2001	1.0	U	
DC-2	12/20/2001	1.0	U	
DC-2	3/13/2002	**4.0**		
DC-2	6/13/2002	1.0	U	
DC-2	9/17/2002	1.0	U	
DC-2	12/10/2002	**0.50**		
DC-2	3/31/2003	**3.37**		
DC-2	9/3/2003	1.0	U	
DC-2	3/16/2004	**0.74**		
DC-2	9/7/2004	1.0	U	
DC-2	4/26/2007	**1.2**		
DC-2	4/14/2008	**0.340**		Chloroform (1.60)
DC-2	11/3/2010	2.0	U	
DC-2	5/31/2011	2.0	U	
DC-2	7/21/2011	2.0	U	
DC-2	10/18/2011	2.0	U	
DC-2	4/4/2012	2.0	U	
DC-3	10/28/1998	**54**		Chloroform (1.9), Toluene (0.6)

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
DC-3	2/4/1999	**25**		
DC-3	4/8/1999	**36**		Chloroform (1.2), Toluene (15)
DC-3	12/8/1999	**45**		
DC-3	4/26/2000	**56**		
DC-3	8/3/2000	**25**		
DC-3	11/14/2000	1.0	U	
DC-3	3/6/2001	**4.7**		
DC-3	6/20/2001	**2.8**		
DC-3	9/17/2001	1.0	U	
DC-3	12/20/2001	**9.2**		
DC-3	3/13/2002	**40.0**		
DC-3	6/13/2002	**42.3**		
DC-3	9/17/2002	**33.4**		
DC-3	12/10/2002	**5.40**		
DC-3	3/31/2003	**7.34**		
DC-3	9/3/2003	**2.08**		
DC-3	3/16/2004	1.0	U	
DC-3	9/7/2004	**3.43**		
DC-3	4/26/2007	**42.0**		
DC-3	4/14/2008	**27.8**		Chloroform (1.50)
DC-3	3/9/2010	2.0	U	
DC-3	11/3/2010	2.0	U	
DC-3	5/30/2011	**3.9**		
DC-3	7/20/2011	**12**		
DC-3	10/18/2011	**6.7**		
DC-3	4/4/2012	**2.9**		
DC-3	10/27/2014	**1.4**		
DC-3	12/11/2015	**1.49**		
DC-3	12/14/2016	1.00	U	
DC-3	3/14/2017	**2.11**		
DC-3	7/18/2017	1.00	U	
DC-3	10/24/2017	**0.786**		
DC-3	4/18/2018	**1.23**		
DC-3	10/17/2018	0.500	U	
DC-4	10/28/1998	**227**		Chloroform (0.9), Toluene (0.7)
DC-4	2/4/1999	**144**		
DC-4	4/8/1999	**110**		Toluene (2.6)
DC-4	12/8/1999	**71**		
DC-4	4/26/2000	**120**		
DC-4	8/3/2000	**42**		
DC-4	11/14/2000	**64**		
DC-4	3/6/2001	**52**		TCE (3.0)
DC-4	6/20/2001	**40**		
DC-4	9/17/2001	**23**		
DC-4	12/20/2001	**15**		
DC-4	3/13/2002	**55**		
DC-4	6/13/2002	**17.9**		

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
DC-4	9/17/2002	**28.8**		
DC-4	12/10/2002	**22.4**		
DC-4	3/31/2003	**12.5**		
DC-4	9/3/2003	**14.1**		
DC-4	3/16/2004	**19.8**		
DC-4	9/7/2004	**18.5**		
DC-4	4/26/2007	**19.0**		
DC-4	4/11/2008	**30.2**		Chloroform (1.2)
DC-4	3/9/2010	**9.2**		
DC-4	11/3/2010	**13**		
DC-4	5/31/2011	2.0	U	Acetone (46)
DC-4	7/20/2011	2.0	U	Acetone (77)
DC-4	10/18/2011	**22**		
DC-4	4/4/2012	**22**		
DC-4	5/30/2013	**11**		
DC-4	10/29/2014	**13**		
DC-4	12/14/2015	**5.49**		
DC-4	12/14/2016	1.00	U	
DC-4	3/14/2017	1.00	U	
DC-4	7/18/2017	1.00	U	
DC-4	10/24/2017	0.500	U	
DC-4	4/18/2018	0.500	U	
DC-4	10/17/2018	0.500	U	
DC-4	12/7/2021	**5.36**		
DC-6	2/4/1999	**5.1**		
DC-6	4/8/1999	**3.7**		Chloroform(1.3), Toluene (2.3)
* Monitoring well cannot be located				
DC-7	2/4/1999	**74**		
DC-7	4/8/1999	**64**		Toluene (1.3)
DC-7	12/8/1999	**107**		
DC-7	4/26/2000	**130**		
DC-7	8/3/2000	**50**		
DC-7	11/14/2000	**130**		
DC-7	3/6/2001	**140**		
DC-7	6/20/2001	**96**		
DC-7	9/17/2001	**81**		
DC-7	12/20/2001	**47**		
DC-7	3/13/2002	**31**		
DC-7	6/13/2002	**41.5**		
DC-7	9/17/2002	**77.7**		
DC-7	12/10/2002	**91.8**		
DC-7	3/31/2003	**40.1**		
DC-7	9/3/2003	**57.4**		
DC-7	7/25/2005	**37.0**		
DC-7	4/11/2006	**23.0**		
DC-7	10/26/2006	**51.0**		
DC-7	4/24/2007	**27.0**		

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)
DC-7	4/16/2008	**50.8**	
DC-7	11/3/2010	**34**	
DC-7	6/1/2011	**15**	
DC-7	7/21/2011	**38**	
DC-7	10/18/2011	**42**	
DC-7	4/5/2012	**18**	
DC-7	5/30/2013	**15**	
DC-7	10/30/2014	**23**	
DC-7	12/16/2015	**13.3**	
DC-7	3/17/2017	**10.4**	
DC-7	10/23/2017	**6.67 J**	
DC-7	1/26/2018	**12.1**	
DC-7	4/20/2018	**12.8**	
DC-7	7/20/2018	**12.3**	
DC-7	10/23/2018	**11.6**	
DC-7	10/30/2019	**17.1**	
DC-7	5/11/2021	**8.35**	
DC-7	12/8/2021	**10.0 J**	
DC-8	2/4/1999	**56**	
DC-8	4/8/1999	**48**	Toluene (1.2)
DC-8	12/8/1999	**98**	
DC-8	4/26/2000	**87**	
DC-8	8/3/2000	**70**	
DC-8	11/14/2000	**130**	
DC-8	3/6/2001	**82**	
DC-8	6/20/2001	**80**	
DC-8	9/17/2001	**62**	
DC-8	12/20/2001	**50**	
DC-8	3/13/2002	**31**	
DC-8	6/13/2002	**26.6**	
DC-8	9/17/2002	**38.4**	
DC-8	12/10/2002	**53.1**	
DC-8	3/31/2003	**36.4**	
DC-8	9/3/2003	**34.7**	
DC-8	7/25/2005	**26.0**	
DC-8	4/11/2006	**14.0**	
DC-8	10/26/2006	**28.0**	
DC-8	4/24/2007	**24.0**	
DC-8	4/16/2008	**39.4**	
DC-8	11/3/2010	**25**	
DC-8	6/1/2011	**11**	
DC-8	7/21/2011	**25**	
DC-8	10/19/2011	**26**	
DC-8	4/5/2012	**18**	
DC-8	5/30/2013	**11**	
DC-8	10/30/2014	**18**	
DC-8	12/16/2015	**8.61**	

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)
DC-8	3/16/2017	**9.69**	
DC-8	7/19/2017	**8.94**	
DC-8	10/23/2017	**14.8**	
DC-8	1/24/2018	**12.0**	
DC-8	4/18/2018	**13.0**	
DC-8	7/18/2018	**11.7**	
DC-8	10/18/2018	**12.1**	
DC-8	10/29/2019	**15.0**	
DC-8	12/8/2021	**11.0**	
DC-9A	4/8/1999	**135**	Toluene (3.2)
DC-9A	12/8/1999	**73**	
DC-9A	4/26/2000	**240**	
DC-9A	8/3/2000	**110**	
DC-9A	4/11/2006	**78**	
DC-9A	8/8/2006	**49**	
DC-9A	11/2/2006	2.9	
DC-9A	4/26/2007	**33**	
* Monitoring well cannot be located			
DC-10A	4/8/1999	**150**	Toluene (1.7)
DC-10A	12/8/1999	**73**	TCE (1.1)
DC-10A	4/26/2000	**210**	
DC-10A	4/5/2012	**41**	
DC-10A	5/31/2013	**19**	
DC-10A	10/30/2014	**17**	
DC-10A	12/15/2016	**10.8**	
DC-10A	3/17/2017	**8.62**	
DC-10A	7/19/2017	**4.69**	
DC-10A	10/26/2017	**4.72**	
DC-10A	1/25/2018	**3.62**	
DC-10A	4/20/2018	**4.67**	
DC-10A	7/17/2018	**2.68**	
DC-11	4/26/2007	**12**	
DC-11	3/9/2010	**4.6**	
DC-11	11/1/2010	**4.8**	
DC-11	4/4/2012	**3.1**	
DC-11	4/15/2014	**1.2**	
DC-11	10/27/2014	**1.4**	
DC-11	12/11/2015	**1.48**	
DC-11	3/15/2017	**1.97**	
DC-11	10/26/2017	**1.35**	
DC-11	4/19/2018	**1.21**	
DC-11	10/18/2018	**1.25**	
DC -12	4/25/2007	**16**	
DC-12	4/4/2012	**3.7**	

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)
DC-12	5/30/2013	**2.3**	
DC-12	4/15/2014	**1.4**	
DC-12	10/27/2014	**1.8**	
DC-12	12/14/2015	**2.04**	
DC-12	3/15/2017	**2.02**	
DC-12	10/27/2017	**1.66**	
DC-12	4/20/2018	**1.50**	
DC-12	10/19/2018	**1.66**	
DC-13	4/25/2007	**15**	
DC-13	4/16/2008	**23**	
DC-13	3/1/2010	**10**	
DC-13	11/2/2010	**9.2**	
DC-13	4/5/2012	**6.4**	
DC-13	5/30/2013	**1.7**	
DC-13	4/14/2014	**3.2**	
DC-13	10/27/2014	**2.7**	
DC-13	12/14/2015	**2.78**	
DC-13	3/15/2017	**4.32**	
DC-13	10/27/2017	**2.79**	
DC-13	4/20/2018	**2.87**	
DC-13	10/19/2018	**2.74**	
DC-14	4/25/2007	**11**	
DC-14	4/3/2012	**11**	
DC-14	5/30/2013	**6.0**	
DC-14	10/29/2014	**19**	
DC-14	12/15/2015	**6.02**	
DC-14	3/16/2017	**6.20**	
DC-14	7/19/2017	**4.94**	
DC-14	10/26/2017	**5.40**	Chloroform (2.23)
DC-14	2/2/2018	**7.81**	
DC-14	4/19/2018	**5.14**	Chloroform (2.27)
DC-14	7/19/2018	**5.40**	Chloroform (1.25)
DC-15	4/24/2007	**11**	
DC-15	4/5/2012	**20**	
DC-15	4/15/2014	**10**	
DC-15	10/30/2014	**5.8**	
DC-15	12/16/2015	**5.93**	
DC-15	3/16/2017	**8.96**	
DC-15	10/23/2017	**7.42**	
DC-15	1/24/2018	**8.61**	
DC-15	4/18/2018	**9.88**	
DC-15	7/18/2018	**7.82**	
DC-15	10/18/2018	**7.65**	
DC-15	10/29/2019	**9.72**	

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
DC-15	12/8/2021	**9.31**		
DC-17	4/25/2007	**47**		
DC-17	4/16/2008	**74.6**		
DC-17	5/31/2013	**21**		
DC-17	10/23/2014	**17**		
DC-17	12/16/2015	**15.1**		
DC-17	3/17/2017	**13.9**		
DC-17	10/23/2017	**8.06**		
DC-17	1/26/2018	**7.38**		
DC-17	4/20/2018	**10.1**		
DC-17	7/20/2018	**8.62**		
DC-17	10/19/2018	**8.24**		
DC-17	5/21/2019	**8.62**		
DC-17	10/30/2019	**5.72**		
DC-17	12/9/2021	**0.810**		
DC-18	4/25/2007	**19**		
DC-18	4/5/2012	**7.2**		
DC-18	5/30/2013	**4.8**		
DC-18	10/28/2014	**3.0**		
DC-18	12/14/2015	**3.19**		
DC-18	3/16/2017	**3.24**		
DC-18	10/26/2017	**3.26**		Chloroform (3.00)
DC-18	4/20/2018	**3.31**		Chloroform (3.23)
DC-18	10/19/2018	**2.79**		Chloroform (2.36)
DC-19	6/4/2007	**0.79**		
DC-19	4/14/2008	**0.66**		
DC-19	4/4/2012	2.0	U	
DC-20	6/2/2008	**8.1**		
DC-20	5/30/2013	**1.7**		
DC-20	4/14/2014	**1.4**		
DC-20	10/28/2014	1.0	U	
DC-20	12/15/2015	**1.74**		1,2-Dichlororpropane (1.82)
DC-20	3/15/2017	**2.00**		
DC-20	10/27/2017	**0.991**		
DC-20	4/19/2018	**1.14**		
DC-20	10/19/2018	**0.885**		Benzene (0.54), sec-Butylbenzene (0.6 0)
KMW-1	4/11/2006	1.0	U	
KMW-1	10/26/2006	1.0	U	
KMW-1	4/25/2007	0.2	U	
KMW-1	4/14/2008	0.2	U	Chloroform (0.450)
KMW-1	4/3/2012	2.0	U	
KMW-2	6/12/2006	**130**		

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
KMW-2	8/8/2006	**130**		
KMW-2	10/26/2006	**190**		
KMW-2	4/24/2007	**63**		
KMW-2	4/16/2008	**96**		
KMW-2	3/8/2010	**81**		
KMW-2	11/3/2010	**74**		
KMW-2	6/1/2011	**12**		Acetone (140)
KMW-2	7/20/2011	**44**		
KMW-2	10/19/2011	**40**		
KMW-2	4/6/2012	**25**		
KMW-2	5/31/2013	**22**		
KMW-2	10/29/2014	**18**		
KMW-2	12/15/2015	**15**		
KMW-2	12/15/2016	**1.18**		
KMW-2	3/14/2017	1.00	U	
KMW-2	7/18/2017	1.00	U	
KMW-2	10/24/2017	0.500	U	
KMW-2	4/18/2018	0.500	U	
KMW-2	10/16/2018	0.500	U	
KMW-3	6/12/2006	**20**		
KMW-3	10/26/2006	**13**		
KMW-3	4/24/2007	**9.9**		
KMW-3	11/2/2010	**11**		
KMW-3	5/31/2011	**6.2**		
KMW-3	7/20/2011	**12**		
KMW-3	10/18/2011	**11**		
KMW-3	4/3/2012	**6.8**		
KMW-3	10/28/2014	1.0	U	
KMW-3	3/14/2017	**3.23**		
KMW-3	10/26/2017	**5.78**		
KMW-3	1/25/2018	**4.95**		
KMW-3	4/20/2018	**5.37**		
KMW-3	7/19/2018	**5.18**		
KMW-3	10/23/2018	**5.41**		
KMW-3	10/25/2019	**4.74**		
KMW-3	12/9/2021	**3.40**		
KMW-4	4/25/2007	**0.73**		
KMW-4	4/3/2012	2.0	U	
KMW-5	4/25/2007	**0.82**		
KMW-5	4/3/2012	2.0	U	
KMW-6	4/24/2007	**3.8**		
KMW-6	4/3/2012	2.0	U	
KMW-7	4/24/2007	**3.8**		

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
KMW-7	4/15/2008	**3.9**		
KMW-7	11/3/2010	2.0	U	
KMW-7	5/30/2011	**2.3**		
KMW-7	7/20/2011	2.0	U	
KMW-7	10/18/2011	2.0	U	
KMW-7	4/3/2012	**3.3**		
KMW-7	10/28/2014	**2.0**		p-isopropyltoluene (2.8)
KMW-7	12/15/2015	**2.17**		
KMW-7	3/16/2017	**1.17**		
KMW-7	10/25/2017	0.500	U	
KMW-7	4/19/2018	**1.59**		
KMW-7	10/23/2018	**0.711**		
KMW-7	10/29/2019	**0.631**		
KMW-7	12/10/2021	**0.620**		
KMW-8	4/24/2007	**11**		
KMW-8	4/15/2008	**17.4**		
KMW-8	4/3/2012	**10**		
KMW-8	10/28/2014	**5.9**		
KMW-8	12/15/2015	**3.98**		
KMW-8	3/16/2017	**6.71**		
KMW-8	7/19/2017	**5.00**		
KMW-8	10/26/2017	**4.99**		Chloroform (1.15)
KMW-8	1/25/2018	**5.89**		Chloroform (2.01)
KMW-8	4/19/2018	**5.74**		Chloroform (1.68)
KMW-8	7/19/2018	**5.17**		Chloroform (1.13)
KMW-8	10/23/2018	**5.26**		Chloroform (1.16)
KMW-8	10/28/2019	**6.24**		
KMW-8	12/10/2021	**1.94**		
KMW-9	4/26/2007	**9.3**		
KMW-9	3/8/2010	**4.4**		
KMW-9	11/4/2010	**2.8**		
KMW-9	4/5/2012	**4.0**		
KMW-9	4/15/2014	**1.0**		
KMW-9	10/27/2014	1.0	U	
KMW-9	12/10/2015	**1.47**		
KMW-9	3/15/2017	**2.07**		
KMW-9	10/26/2017	**0.770**		
KMW-9	4/18/2018	**1.02**		
KMW-9	10/18/2018	0.500	U	Chloroform (0.699)
Deep Monitoring Wells				
MW-19	10/29/2019	0.500	U	Chloroform (0.560)
MW-19	12/4/2019	0.500	U	
DC-5	2/4/1999	**2.4**		

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
DC-5	4/8/1999	**1.6**		Chloroform (2.6), Toluene (1.0)
DC-5	7/25/2005	**37**		
DC-5	4/11/2006	**1.3**		
DC-5	4/26/2007	**2.1**		
DC-5	11/3/2010	**2.1**		
DC-5	5/30/2011	2.0	U	
DC-5	7/19/2011	2.0	U	
DC-5	10/18/2011	2.0	U	
DC-5	4/6/2012	2.0	U	
DC-5	5/29/2013	1.0	U	
DC-9B	4/8/1999	**1.4**		Chloroform (1.4), Toluene (2.9)
DC-9B	3/6/2001	**2.0**		
DC-9B	6/20/2001	1.0	U	
DC-9B	9/17/2001	1.0	U	
DC-9B	12/20/2001	**6.4**		
DC-9B	7/25/2005	1.0	U	
DC-9B	4/11/2006	1.0	U	
DC-9B	8/8/2006	1.0	U	
DC-9B	10/26/2006	1.0	U	
DC-9B	4/26/2007	0.2	U	
DC-9B	4/15/2008	**0.60**		
* Monitoring well has been decommissioned				
DC-10B	4/8/1999	**1.8**		Chloroform (1.2), Toluene (1.9)
DC-10B	3/6/2001	**3.3**		TCE (1.7)
DC-10B	6/20/2001	**2.4**		
DC-10B	9/17/2001	1.0	U	
DC-10B	12/20/2001	1.0	U	
DC-10B	7/25/2005	1.0	U	
DC-10B	4/11/2006	1.0	U	
DC-10B	4/26/2007	**0.34**		
DC-10B	11/3/2010	**2.6**		
DC-10B	5/30/2011	2.0	U	Acetone (290)
DC-10B	7/19/2011	2.0	U	Acetone (54)
DC-10B	10/18/2011	2.0	U	Acetone (31)
DC-10B	4/6/2012	2.0	U	
DC-16	4/25/2007	**0.42**		
DC-16	11/5/2010	2.0	U	
DC-16	5/31/2011	2.0	U	
DC-16	7/19/2011	2.0	U	
DC-16	10/18/2011	2.0	U	
DC-16	4/6/2012	2.0	U	
KMW-5D	4/25/2007	0.2	U	
KMW-5D	4/3/2012	2.0	U	

Table C3
Historical Summary of Groundwater Analytical Results (1999 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)

NOTES:

1. Tetrachloroethene (PCE) concentrations in migrograms per liter (µg/l).
2. Groundwater samples analyzed using USEPA Method 8260B.
3. U = concentration not detected at or above the laboratory practical quantitation limit (PQL).
4. J = the identification of the analyte is acceptable; the reported value is an estimate
5. Detected concentrations are shown in **bold.**
6. Concentrations exceeding the cleanup level are **bold and shaded**.
7. Other detected VOCs are below their respective cleanup level unless otherwise noted.
8. Shallow monitoring wells are screened at the top of the shallow aquifer, and deep monitoring wells are screened below and deeper within the shallow aquifer.
9. Review of historical results indicate that DC-17 was inadvertently sampled as DC-5 in 2010, 2011 and 2012. This table reports the 2010 - 2012 DC-17 data as DC-5.

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
B-01	2	03/12/98	**0.28**		
B-01	5	03/12/98	**35**		
B-02	2	03/12/98	**0.3**		
B-02	4	03/12/98	**1.2**		
B-03	2	03/12/98	**1.2**		
B-03	5	03/12/98	**1.3**		
B-04	2	03/12/98	**1.4**		
B-04	2	03/12/98	**0.88**		Duplicate
B-04	5	03/12/98	**0.99**		
S-01	11	04/14/98	**0.8**		
S-01	20	04/14/98	**0.6**		
S-01	30	04/14/98	ND U		
S-01	34	04/14/98	ND U		
DC-01	NA	12/17/98	ND U		Composite
DC-02	NA	12/17/98	**0.19**		Composite
DC-03	NA	12/17/98	ND U		Composite
DC-04	NA	12/17/98	**0.15**		Composite
DC-04	NA	12/17/98	**0.16**		Duplicate
DC-03	NA	12/17/98	**0.18**		Comp (sat)
DC-04	NA	12/17/98	ND U		Comp (sat)
BH-01	3.5	12/16/98	**0.88**	Ethylbenzene = 0.17 Xylenes = 0.63	
BH-01	3.5	12/16/98	**0.9**	Benzene = 0.15, Xylenes 0.66	Duplicate
BH-01	9	12/16/98	**0.19**		
BH-02	8	12/16/98	ND U		
BH-03	7	12/16/98	ND U		
BH-04	7	12/16/98	ND U		
BH-05	6	12/16/98	**2.2**		
BH-05	6	12/16/98	**2.2**		Duplicate
BH-05	11	12/16/98	ND U		
BH-06	7	12/16/98	ND U		
BH-06	10	12/16/98	ND U	cis-1,2-dichloroethene = 0.07	
BH-07	1	12/16/98	**0.1**	Benzene = 0.31 Toluene = 0.32 Xylenes = 0.38	
BH-08	8	12/16/98	ND U		
BH-09	8	12/16/98	ND U	Benzene = 0.66 Ethylbenzene = 1.1	
BH-10	8	12/16/98	ND U		
BH-11	1	12/16/98	ND U		
BH-12	8	12/16/98	ND U		
BH-13	7	12/16/98	**1.4**		
BH-13	11	12/16/98	ND U		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
BH-14	8	12/16/98	**10**		
BH-14	11	12/16/98	**0.22**		
BH-14	11	12/16/98	**0.16**		Duplicate
BH-14	20	12/16/98	ND U		
BH-15	6	12/17/98	**1.1**		
BH-15	11	12/17/98	ND U		
BH-16	7	12/17/98	**0.3**		
BH-16	11	12/17/98	ND U		
BH-17	11	12/17/98	ND U		
BH-18	7	12/17/98	ND U		
BH-18	11	12/17/98	ND U		
BH-19	8	12/17/98	ND U		
DC-05	56	01/22/99	ND U		
DC-06	40	01/22/99	ND U		
DC-07	35	01/22/99	ND U		
DC-08	35	01/22/99	ND U		
DC-9B	35	04/05/99	ND U		
DC-10B	50	04/05/99	ND U		
MW-01	2.5-4	12/09/99	ND U		
MW-02	32.5-34	12/09/99	ND U		
HA-01	4.5-5	12/22/99	0.05 U		
HA-01	10.10.5	12/22/99	**0.0685**		
HA-01	12.5-13	12/22/99	0.05 U		
T-01	4	07/26/00	ND U		S.Sewer Ex.
T-02	4	07/26/00	ND U		S.Sewer Ex.
T-03	3	07/26/00	ND U		S.Sewer Ex.
T-04	3	07/26/00	ND U		S.Sewer Ex.
SVS-04	0-4	02/11/05	**0.0058**		
SVS-05	0-4	02/11/05	0.0011 U		
KB-01	4-5	04/15/05	0.02 U		
KB-01	15-16	04/15/05	**0.02**		
KB-01	25-26	04/15/05	**0.084**		
KB-01	35-36	04/15/05	**0.18**		
KB-02	4-5	04/15/05	0.02 U		
KB-02	15-16	04/15/05	0.02 U		
KB-02	25-26	04/15/05	**0.098**		
KB-02	35-36	04/15/05	**0.16**		
KB-03	4-5	04/15/05	0.02 U		
KB-03	15-16	04/15/05	0.02 U		
KB-03	25-26	04/15/05	0.02 U		
KB-04	4-5	04/15/05	0.02 U		
KB-04	15-16	04/15/05	**0.049**		
KB-04	19-20	04/15/05	**0.1**		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
KB-05	4-5	04/15/05	0.02 U		
KB-05	15-16	04/15/05	0.02 U		
KB-05	25-26	04/15/05	**0.035**		
KB-05	35-36	04/15/05	**0.055**		
ST-01	6	03/29/06	**0.07**		Overexcavated
North Septic Sidewall	9	04/05/06	0.005 U		Sidewall
East Septic Sidewall	9	04/05/06	**0.033**	TCE = 0.019, cis-1,2-DCE=0.012	Overexcavated
South Septic Sidewall	9	04/05/06	0.005 U		Sidewall
West Septic Sidewall	9	04/05/06	0.005 U		Sidewall
ST-02	6	04/05/06	**0.006**	TCE = 0.005, cis-1,2-DCE=0.007	Overexcavated
ST-03	7	04/05/06	**0.016**		Overexcavated
ST-04	7	04/05/06	**0.073**	TCE = 0.026, cis-1,2-DCE=0.032	Overexcavated
ST5 Clearance	9	04/05/06	0.005 U		Overexcavated
ST6 Clearance	9	04/05/06	**0.007**		Bottom
East Septic Sidewall 2	11	04/06/06	0.005 U		Sidewall
ST5 Clearance 2	12	04/05/06	0.005 U		Bottom
KMW-01	7	07/25/05	0.05 U		
KMW-01	22	07/25/05	0.05 U		
KMW-01	40	07/25/05	0.05 U		
KMW-02	10	05/01/06	0.05 U		
KMW-02	20	05/01/06	0.05 U		
KMW-02	30	05/01/06	0.05 U		
KMW-03	10	05/01/06	0.05 U		
KMW-03	20	05/01/06	0.05 U		
TW-01	5	05/01/06	0.05 U		
TW-01	10	05/01/06	0.05 U		
TW-01	20	05/01/06	0.05 U		
TW-01	30	05/01/06	0.05 U		
KMW-04	4-5.5	03/28/07	0.05 U		
KMW-04	9-10.5	03/28/07	0.05 U		
KMW-04	19-20.5	03/28/07	0.05 U		
KMW-04	29-30.5	03/28/07	0.05 U		
KMW-05	4-5.5	03/28/07	0.05 U		
KMW-05	9-10.5	03/28/07	0.05 U		
KMW-05	19-20.5	03/28/07	0.05 U		
KMW-05	29-30.5	03/28/07	0.05 U		
KMW-5D	4-5.5	03/28/07	0.05 U		
KMW-5D	9-10.5	03/28/07	0.05 U		
KMW-5D	24-25.5	03/28/07	0.05 U		
KMW-5D	46	03/28/07	0.05 U		
KMW-06	9-10.5	03/27/07	0.05 U		
KMW-06	19-20.5	03/27/07	0.05 U		
KMW-06	29-30.5	03/27/07	0.05 U		
KMW-06	41-42.5	03/27/07	0.05 U		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
KMW-07	9-10.5	03/27/07	0.05 U		
KMW-07	19-20.5	03/27/07	0.05 U		
KMW-07	29-30.5	03/27/07	0.05 U		
KMW-08	9-10.5	03/27/07	0.05 U		
KMW-08	20-21.5	03/27/07	0.05 U		
KMW-08	29-30.5	03/27/07	0.05 U		
KMW-09	5	03/27/07	**0.0043**		
KMW-09	14-15.5	03/27/07	**0.2**		
KMW-09	19-20.5	03/27/07	**0.23**		
KMW-09	24-25.5	03/27/07	**1.8**		
KMW-09	29-30.5	03/27/07	**0.32**		
KMW-09	34-35.5	03/27/07	**0.29**		Split
KMW-09	35	03/27/07	**0.016**		Split
KMW-09	39-40.5	03/27/07	**0.053**		
KGP-01	4	07/06/07	**1.6**		Split
KGP-01	4	07/06/07	**13**	TCE = 0.15	Split
KGP-01	8	07/06/07	**59**		Split
KGP-01	8	07/06/07	**14**		Split
KGP-01	10.5	07/06/07	**2.1**		
KGP-01	16	07/06/07	**0.28**		Split
KGP-01	16	07/06/07	**0.08**		Split
KGP-01	20	07/06/07	**0.23**		
KGP-01	23	07/06/07	**0.15**		
KGP-01	32	07/06/07	**0.17**		
KGP-01	38	07/06/07	**0.051**		
KGP-02	4	07/06/07	**0.16**		Split
KGP-02	4	07/06/07	**0.087**		Split
KGP-02	8	07/06/07	**0.013**		Split
KGP-02	8	07/06/07	**0.0082**		Split
KGP-02	10.5	07/06/07	**0.064**		
KGP-02	16	07/06/07	**0.02**		Split
KGP-02	16	07/06/07	**0.022**		Split
KGP-02	20	07/06/07	**0.088**		
KGP-02	23	07/06/07	**0.033**		
KGP-02	30-31	07/06/07	**0.016**		
KGP-02	37	07/06/07	**0.015**		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
KGP-03	2-4	07/06/07	**0.001**		Split
KGP-03	2-4	07/06/07	**0.0017**		Split
KGP-03	8	07/06/07	**0.005**		Split
KGP-03	8	07/06/07	**0.0045**		Split
KGP-03	10.5	07/06/07	**0.007**		
KGP-03	13-16	07/06/07	**0.009**		Split
KGP-03	13-16	07/06/07	**0.0089**		Split
KGP-03	20	07/06/07	**0.009**		
KGP-03	23	07/06/07	**0.012**		
KGP-03	29-32	07/06/07	**0.011**		
KGP-03	38	07/06/07	**0.01**		
GP-01	8-12	03/30/07	0.0008 U		
GP-01	30-34	03/30/07	**0.0067**		
GP-02	4-8	04/02/07	0.0009 U		
GP-02	28-32	04/02/07	**0.0055**		
GP-03	8-12	03/30/07	0.00099 U		
GP-03	28-30	03/30/07	**0.011**		
GP-04	20-24	03/30/07	**0.0023**		
GP-05	4-8	04/03/07	**0.0028**		
GP-05	16-20	04/03/07	**0.024**		
GP-06	4-8	04/02/07	0.0011 U		
GP-06	27-30	04/02/07	**0.0033**		
GP-07	4-8	04/02/07	0.00095 U		
GP-07	30-34	04/02/07	**0.0016**		
GP-08	6	05/27/08	**0.0017**		
GP-08	10	05/27/08	**0.0026**		
GP-09	4	05/27/08	0.00086 U		
GP-09	10	05/27/08	**0.0019**		
GP-10	4	05/27/08	0.001 U		
GP-10	10	05/27/08	**0.0017**		
GP-11	6	05/27/08	**0.0014**		
GP-11	10	05/27/08	**0.0013**		
GP-12	6	05/27/08	**0.0011**		
GP-12	10	05/27/08	0.00092 U		
DC-11	15-16.5	04/19/07	**0.0013**		
DC-11	30-31.5	04/19/07	**0.0084**		
DC-12	15-16.5	04/18/07	**0.0024**		
DC-13	15-16.5	04/19/07	**0.00096**		
DC-13	35-36.5	04/19/07	**0.0081**		
DC-14	15-16.5	04/17/07	0.0011 U		
DC-15	15-16.5	04/16/07	0.0011 U		
DC-16	15-16.5	04/17/07	0.0011 U		
DC-17	15-16.5	04/16/07	0.001 U		
DC-17	35-36.5	04/16/07	**0.077**		
DC-18	15-16.5	04/18/07	0.001 U		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
DC-19	3.5-5	06/01/07	0.00077 U		
DC-19	7.5-9	06/01/07	0.00069 U		
DC-19	37.5-38	06/01/07	**0.0047**		
DC-20	10	05/28/08	**0.0026**		
DC-20	35	05/28/08	**0.0018**		
TP-01	4	05/12/08	**0.001**		Split
TP-01	4	05/12/08	0.02 U		Split
TP-01	6.5	05/12/08	0.0012 U		Split
TP-01	6.5	05/12/08	**0.02**		Split
TP-02-south	4	05/12/08	**0.0068**		Split
TP-02-south	4	05/12/08	**0.27**		Split
TP-02-north	4	05/12/08	**0.05**		
TP-03	3.5	05/12/08	**0.014**		Split
TP-03	3.5	05/12/08	**0.02**		Split
TP-05	2.5	05/12/08	**0.34**		
B-05	10	03/26/08	0.00287 U		
B-05	20	03/26/08	**0.0034**		
B-05	30	03/26/08	**0.00888**		
B-06	10	03/25/08	0.00302 U		
B-06	20	03/25/08	**0.00816**		
B-06	30	03/25/08	**0.00899**		
B-07	10	03/25/08	0.000151 U		
B-07	20	03/25/08	**0.00351**		
B-07	30	03/25/08	**0.00884**		
B-08	10	03/26/08	**0.00654**		
B-08	20	03/26/08	**0.00554**		
B-08	30	03/26/08	**0.00562**		
B-09	10	03/25/08	**0.00616**		
B-09	20	03/25/08	**0.0143**		
B-09	30	03/25/08	**0.0116**		
B-10	10	03/24/08	**0.671**		
B-10	20	03/24/08	**0.0508**		
B-10	30	03/24/08	**0.0154**		
B-11	10	03/27/08	**0.0324**		
B-11	20	03/27/08	**0.346**		
B-11	30	03/27/08	**0.279**		
B-12	10	03/27/08	0.00292 U		
B-12	20	03/27/08	**0.00299**		
B-12	30	03/27/08	**0.00848**		
B-13	10	03/27/08	**0.0311**		
B-13	20	03/27/08	**0.0314**		
B-13	30	03/27/08	**0.0231**		
B-14	10	03/24/08	**0.0118**		
B-14	20	03/24/08	**0.0296**		
B-14	30	03/24/08	**0.594**		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
B-15	10	03/24/08	**0.00532**		
B-15	20	03/24/08	**0.0188**		
B-15	30	03/24/08	**0.00785**		
B-16	10	03/25/08	0.00324 U		
B-16	20	03/25/08	0.00324 U		
B-16	24	03/25/08	0.000139 U		
B-17	10	03/26/08	0.00269 U		
B-17	20	03/26/08	0.00251 U		
B-17	30	03/26/08	0.00244 U		
SB-01	10	04/19/11	0.01 U		
SB-01	20	04/19/11	0.01 U		
SB-01	30	04/19/11	0.01 U		
SB-02	10	04/19/11	0.01 U		
SB-02	20	04/19/11	0.01 U		
SB-02	30	04/19/11	0.01 U		
SB-03	10	04/19/11	0.01 U		
SB-03	20	04/19/11	0.01 U		
SB-03	30	04/19/11	0.01 U		
SB-04	5	03/01/12	0.01 U		
SB-04	10	03/01/12	0.01 U		
SB-04	20	03/01/12	0.01 U		
SB-04	30	03/01/12	0.01 U		
SB-04	34	03/01/12	0.01 U		
SB-05	10	02/29/12	0.01 U		
SB-05	20	02/29/12	0.01 U		
SB-05	30	02/29/12	0.01 U		
SB-06	5	02/29/12	0.01 U		
SB-06	10	02/29/12	**0.028**		
SB-06	20	02/29/12	0.01 U		
SB-06	30	02/29/12	0.01 U		
SB-06	38	02/29/12	0.01 U		
SB-07	5	03/01/12	0.01 U		
SB-07	20	03/01/12	0.01 U		
SB-07	30	03/01/12	0.01 U		
SB-07	38	03/01/12	0.01 U		
SB-07	43	03/01/12	0.01 U		
SB-08	10	02/29/12	0.01 U		
SB-08	20	02/29/12	0.01 U		
SB-08	30	02/29/12	0.01 U		
SB-09	2	04/28/12	ND U		
SB-09	8	04/28/12	**0.013**		
SB-09	12	04/28/12	ND U		
SB-09	20	04/28/12	ND U		
AS-2	5	09/29/14	0.0011 U	Acetone = 0.082	
AS-3	10	10/01/14	**0.0010**		
AS-4	5	09/30/14	**0.0011**		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
AS-5	15	09/30/14	**0.0040**		
AS-6	5	09/26/14	**0.0042**	Acetone = 0.063	
AS-7	5	09/24/14	0.0012 U	Acetone = 0.29	
AS-8	3.5	09/30/14	**0.0075**		
AS-8	25	10/17/14	**0.029**	n-butylbenzene = 0.0036, sec-butylbenzene = 0.002 p-isopropyltoluene = 0.0016 Napthalene = 0.0041 1,2,4-Trimethlybenzene = 0.047 1,2,3-Trimethlybenzene = 0.014 1,3,5-Trimethlybenzene = 0.013 Total xylenes = 0.011	
AS-9	3	09/30/14	**0.0039**		
AS-9	25	10/16/14	**0.012**	n-butylbenzene = 0.0034, sec-butylbenzene = 0.0014 p-isopropyltoluene = 0.0012 Napthalene = 0.0088 n-propylbenzene = 0.0029 1,2,4-Trimethlybenzene = 0.042 1,2,3-Trimethlybenzene = 0.016 1,3,5-Trimethlybenzene = 0.010 Total xylenes = 0.0078	
AS-10	3	10/01/14	0.0011 U	Acetone = 0.069	
AS-10	8	10/14/14	**0.007**		
AS-11	3	10/01/14	**0.0011**		
AS-11	10	10/13/14	**0.0021**		
AS-12	3	10/01/14	**0.0017**	Acetone = 0.100 n-butylbenzene = 0.0013, n-propylbenzene = 0.0019 1,2,4-Trimethlybenzene = 0.020 1,2,3-Trimethlybenzene = 0.0053 1,3,5-Trimethlybenzene = 0.006 Total xylenes = 0.0084	
AS-12	8	10/10/14	**0.017**		
AS-13	3	10/01/14	**0.0028**		
AS-13	8	10/01/14	**0.0022**		
AS-14	3	09/29/14	**0.0038**		
AS-14	8	10/08/14	**0.0021**		
AS-15	3	09/29/14	**0.014**	Acetone = 0.11	
AS-15	8	10/06/14	**0.0031**		
AS-16	3	09/29/14	**0.018**		
AS-16	15	10/07/14	**0.0032**		
AS-17	3	09/29/14	**0.044**	Acetone = 0.33, MEK = 0.011	
AS-17	8	10/03/14	**0.0071**	1,2,4-Trimethlybenzene = 0.0028 1,2,3-Trimethlybenzene = 0.001	
AS-17	30	10/03/14	**0.0022**		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
AS-18	3	09/29/14	**0.0049**		
AS-18	8	10/02/14	**0.0014**		
AS-19	3	09/29/14	**0.0091**		
AS-19	8	10/02/14	**0.094**	n-butylbenzene = 1.4 sec-butylbenzene = 0.67 2-Chlorotoluene = 0.48 4-Chlorotoluene = 0.52 Ethylbenzene = 0.94 Cumene = 0.41 p-isopropyltoluene = 0.41 Napthalene = 1.5 n-propylbenzene = 1.8 Styrene = 0.089 1,1,2,2-Tetrachloroethane = 0.45 Toluene = 0.13 1,2,3-Trichlorotoluene = 0.036 1,1,2-Trichloroethane = 0.34 1,2,4-Trimethlybenzene = 18 1,2,3-Trimethlybenzene = 4.6 1,3,5-Trimethlybenzene = 5.0 Total xylenes = 7.7	
AS-20	3	09/29/14	**0.012**		
AS-20	10	10/06/14	**0.0033**	1,2,4-Trimethlybenzene = 0.0029	
AS-21	3	10/01/14	**0.0034**		
AS-21	8	10/07/14	**0.0038**		
AS-22	3	10/01/14	**0.0066**	Acetone = 0.062	
AS-22	8	10/01/14	**0.0052**		
AS-22	10	10/08/14	**0.0027**	Acetone = 0.073 n-butylbenzene = 0.0097 sec-butylbenzene = 0.0059 Ethylbenzene = 0.0072 Cumene = 0.0041 p-isopropyltoluene = 0.0036 Napthalene = 0.022 n-propylbenzene = 0.019 1,2,4-Trimethlybenzene = 0.18 1,2,3-Trimethlybenzene = 0.052 1,3,5-Trimethlybenzene = 0.047 Total xylenes = 0.076	
AS-23	3	09/30/14	**0.0012**		
AS-23	8	09/30/14	**0.0022**		
AS-23	10	10/10/14	**0.0038**		
AS-24	3	09/30/14	**0.0074**	Acetone = 0.066	
AS-24	8	09/30/14	**0.0013**		
AS-24	10	10/14/14	**0.0022**		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
AS-25	3	10/01/14	**0.0017**		
AS-25	10	10/15/14	**0.0020**		
AS-26	3	09/30/14	**0.0093**	Acetone = 0.057	
AS-26	8	09/30/14	**0.0089**	Acetone = 0.057	
AS-26	10	10/16/14	**0.0067**		
AS-27	3	09/30/14	**0.0051**		
AS-27	8	10/17/14	**0.015**		
AS-28	10	09/22/14	**0.0082**		
AS-29	5	09/23/14	**0.0034**	Acetone = 0.21, MEK = 0.018	
AS-30	5	09/25/14	**0.0015**		
AS-31	5	09/25/14	0.0011 U	Acetone = 0.076	
SVE-14	3.5	09/30/14	0.0011 U		
SVE-14	8.5	10/13/14	**0.0012**	1,2,4-Trimethlybenzene = 0.0044 1,2,3-Trimethlybenzene = 0.0019 1,3,5-Trimethlybenzene = 0.0015	
SVE-15	3	11/01/14	**0.0018**		
SVE-15	8	10/15/14	**0.0024**		
SVE-16	3	09/30/14	**0.0037**		
SVE-16	10	10/15/14	**0.008**	n-butylbenzene = 0.0048 sec-butylbenzene = 0.0028 Ethylbenzene = 0.0013 Cumene = 0.0013 p-isopropyltoluene = 0.0023 Napthalene = 0.0075 n-propylbenzene = 0.0057 Styrene = 0.089 1,1,2,2-Tetrachloroethane = 0.45 1,2,4-Trimethlybenzene = 0.074 1,2,3-Trimethlybenzene = 0.023 1,3,5-Trimethlybenzene = 0.021 Total xylenes = 0.020	
SVE-17	5	09/24/14	**0.026**		
SVE-18	5	09/23/14	**0.0024**		
SVE-19	5	09/29/14	0.0011 U		
SB-10	6	04/16/18	**0.193**		
SB-10	10	04/16/18	0.0359 U		
SB-11	8	04/16/18	0.0347 U		
SB-11	15	04/16/18	0.0353 U		
SB-12	1	04/16/18	0.0348 U		
SB-12	5	04/16/18	**0.138**		
SB-12	10	04/16/18	0.0325 U		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
SB-13	5	04/16/18	0.0350 U		
SB-13	10	04/16/18	**0.128**		
SB-13	20	04/16/18	**6.03**		
SB-13	29	04/16/18	**0.110**		
SB-13b	36	04/25/18	**0.0829**		
SB-13b	40	04/25/18	**0.128**		
SB-14	5	04/16/18	0.0317 U		
SB-14	10	04/16/18	0.0298 U		
SB-14	20	04/16/18	0.0253 U		
SB-14	30	04/16/18	**0.109**		
SB-14a	40	04/25/18	**0.105**		
SB-15	10	04/17/18	0.0334 U		
SB-15	20	04/17/18	**0.0781**		
SB-15	30	04/17/18	**0.0645**		
SB-15	40	04/17/18	**0.132**		
SB-16	20	04/17/18	0.0366 U		
SB-16	30	04/17/18	**0.0505**		
SB-16	40	04/17/18	**0.0575**		
SB-17	20	04/18/18	**0.0435**		
SB-17	30	04/18/18	0.0281 U		
SB-17	40	04/18/18	**0.0286**		
SB-18	30	04/18/18	**0.0429**		
SB-18	40	04/18/18	**0.0284**		
SB-26	2	04/24/18	**0.0960**		
SB-26	4	04/24/18	0.0292 U		
SB-26	10	04/24/18	0.0433 U		
SB-26	20	04/24/18	**0.0763**		
SB-26	30	04/24/18	**0.0647**		
SB-26	40	04/24/18	0.0340 U		
SB-27	2	04/24/18	**0.0800**		
SB-27	4	04/24/18	0.0426 U		
SB-27	10	04/24/18	0.0339 U		
SB-27	20	04/24/18	**0.0942**		
SB-27	30	04/24/18	**0.118**		
SB-27	40	04/24/18	**0.169**		
SB-28	20	04/24/18	0.0323 U		
SB-28	30	04/24/18	**0.0784**		
SB-28	40	04/24/18	0.0325 U		
SB-30	30	04/25/18	0.0395 U		
SB-30	35	04/25/18	**0.142**		
SB-30	40	04/25/18	**0.0665**		
MW-17	25	03/01/19	0.0244 U		
MW-17	30	03/01/19	0.0267 U		
MW-17	35	03/01/19	**0.0543**		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
MW-18	10	02/28/19	0.0314 U		
MW-18	30	02/28/19	**0.0288**		
MW-18	35	02/28/19	**0.0358**		
MW-19	30.5	10/17/19	0.0271 U		
MW-19	35	10/17/19	**0.0717**		
MW-19	38	10/17/19	**0.107**		
MW-19	44	10/17/19	0.0268 U		
MW-20	30	10/17/19	**0.0280** U		
MW-20	35	10/17/19	**0.0299**		
SVE-20	2	08/31/20	**0.0907**		
SVE-20	8.5	08/31/20	**1.54**		
SVE-20	11	08/31/20	**1.30**	Cis-1,2-dichloroethene = 0.0455; Trichloroethene = 0.0226	
SVE-21	2	08/31/20	**0.254**		
SVE-21	12	08/31/20	**0.0381**		
SVE-21	25	08/31/20	**0.0558**		
SVE-21	35	08/31/20	**0.135**		
SVE-22	2	09/01/20	**0.0320**		
SVE-22	26	09/01/20	**0.102**		
SVE-22	32	09/01/20	**0.105**		
SVE-23	2	09/01/20	0.0270 U		
SVE-23	19	09/01/20	**0.0252**	1,2,3-Trichlorobenzene = 0.0254; Hexachlorobutadiene = 0.0313	
SVE-23	25	09/01/20	**0.0489**		
SVE-24	3	08/31/20	0.0315 U		
SVE-24	8	09/01/20	0.0215 U		Vert depth = 5.7 ft
SVE-24	13.5	09/01/20	0.0245 U		Vert depth = 9.6 ft
SVE-25	2	09/01/20	0.0269 U		
SVE-25	11.5	09/02/20	**0.0373**		Vert depth = 8.2 ft
SVE-25	43.5	09/02/20	**0.063**		Vert depth = 30.9 ft
SVE-25	49	09/02/20	**0.0422**		Vert depth = 34.8 ft
Trench	2.5	09/02/20	0.0240 U		Adj. to sanitary line
EX-1	1.5	09/17/20	**0.144**		
EX-1	4	09/17/20	0.0242 U		
EX-2	1	09/17/20	0.0233 U		
EX-2	4	09/17/20	0.0260 U		
EX-3	3	09/17/20	0.0239 U		
EX-3	4	09/17/20	0.0240 U		
EX-4	2	09/17/20	**0.130**		
EX-4	4	09/17/20	0.0224 U		
EX-5	2	09/17/20	0.0237 U		
EX-6	3	09/17/20	0.00565 U		
EX-7	2	09/17/20	0.00620 U		
EX-8	1.5	09/17/20	0.00632 U		
EX-9	3	09/17/20	0.00666 U		

Table C4
Historical Summary of Soil Analytical Results (1998 - 2021)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
EX-10	3	09/17/20	0.00588 U		
EX-11	2	09/17/20	0.00642 U		
EX-12	2	09/17/20	0.00606 U		
EX-13	2	09/17/20	0.00642 U		
EX-14	2	09/17/20	0.00608 U		
EX-15	2	09/17/20	0.00576 U		
EX-16	1.5	01/27/21	0.0214 U		
EX-17	1.5	01/27/21	**0.0876**		
EX-18	1.5	01/27/21	0.0236 U		
EX-19	2	01/27/21	0.0265 U		
EX-20	2.5	01/27/21	0.0231 U		
EX-21	2	01/27/21	0.0229 U		
EX-22	2.5	01/27/21	0.0237 U		
EX-23	2	01/27/21	0.0273 U		
EX-24	2	01/27/21	0.0242 U		
EX-25	3	01/27/21	0.0264 U		
EX-26	3	01/27/21	0.0231 U		
EX-27	3	01/27/21	0.0193 U		

NOTES:

1. Tetrachloroethene (PCE) concentrations in milligrams per kilogram (mg/kg).
2. Samples analyzed using USEPA Methods 8260 (and by 8021B in 1998 through 2000 only). Samples EX-6 EX-15 analyzed by EPA Method 8260-SIM
3. ND and U = concentration not detected at or above the laboratory practical quantitation limit (PQL).
4. Detected concentrations are shown in **bold.**
5. Concentrations exceeding the PCE MTCA Method A cleanup level of 0.050 mg/kg are **bold and shaded**.
6. Other detected VOCs - only those which are above their respective cleanup level are listed.
7. SVE-24 and SVE-25 were installed at a 45 degree angle and sample depths indicate length along boring. Vertical depths are included in the comments.

Table C5

Soil Vapor Results - March 11 and June 3, 2019
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Parameter	CAS Number	Commercial Remediation Screening Level	Subslab Soil Gas Sample ID												Soil Gas Sample ID	
			SVS-10		SVS-11		SVS-12	SVS-13		SVS-14		SVS-15		SVS-16	SVS-17	
			3/11/2019	6/3/2019	3/11/2019	6/3/2019	6/3/2019	3/11/2019	6/3/2019	3/11/2019	6/3/2019	3/11/2019	6/3/2019	3/11/2019	3/11/2019	6/3/2019
		Screen Depth (ft)	1.3		1.3		1.3	1.2		1.3		1.3		1.3	4.5 to 5	
cis-1,2-Dichloroethene	156-59-2	-	1.59 U	1.59 U	1.59 U	**15.0**	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	**1,230**	**8,600**
trans-1,2-Dichloroethene	156-60-5	-	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	1.59 U	**43.4**	**519**
Tetrachloroethene	127-18-4	1,067	**105**	**485**	**108**	**537**	**367**	**611**	**1,500**	**9.93**	**168**	**50.5**	**115**	**369**	**26,900**	**104,000**
Trichloroethene	79-01-6	36.7	**2.52**	2.14 U	2.14 U	**5.64**	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	2.14 U	**319**	**3,290**
Vinyl Chloride	75-01-4	31.7	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U	1.02 U	**44.7**	**21.4**

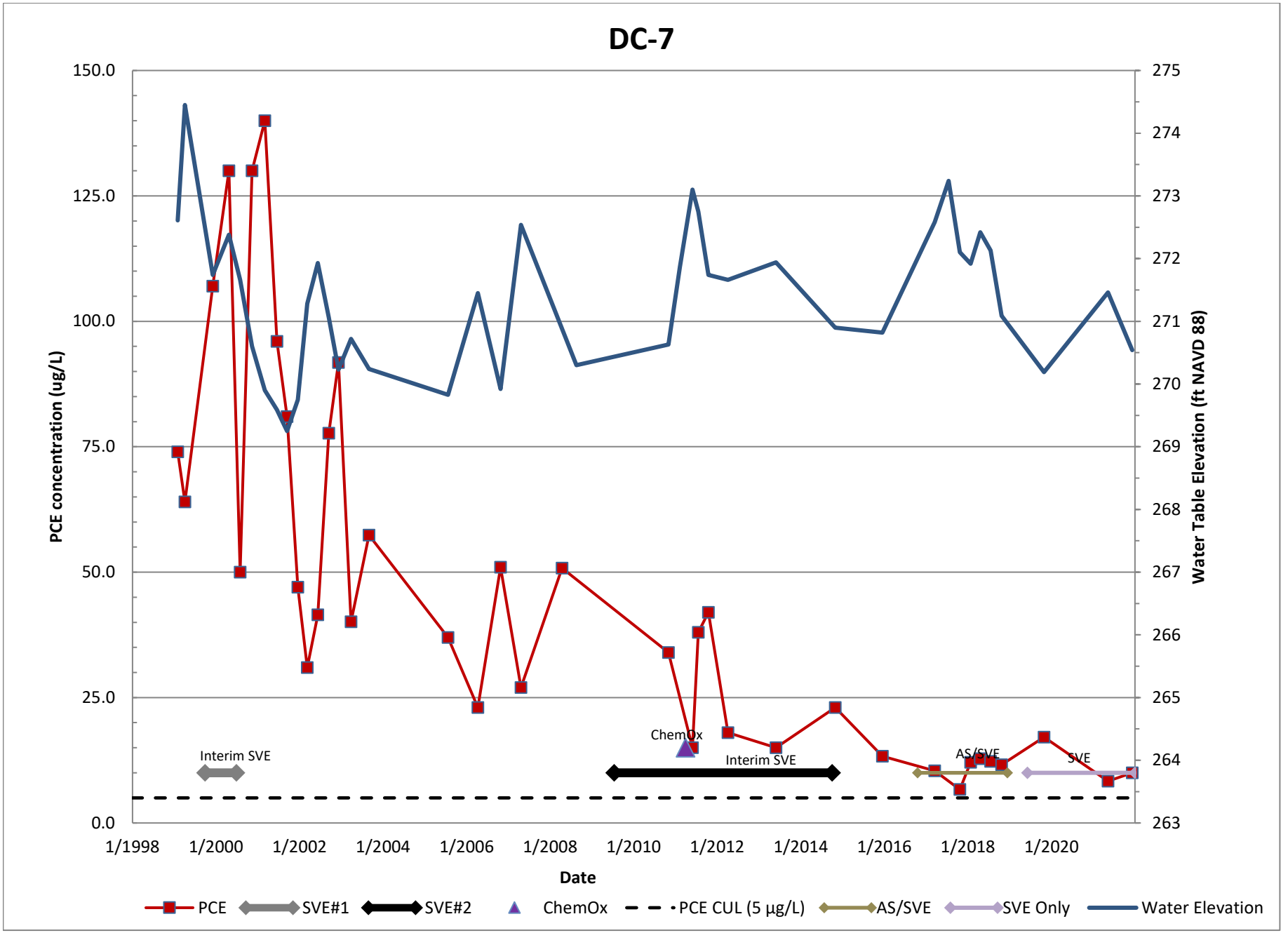
NOTES:

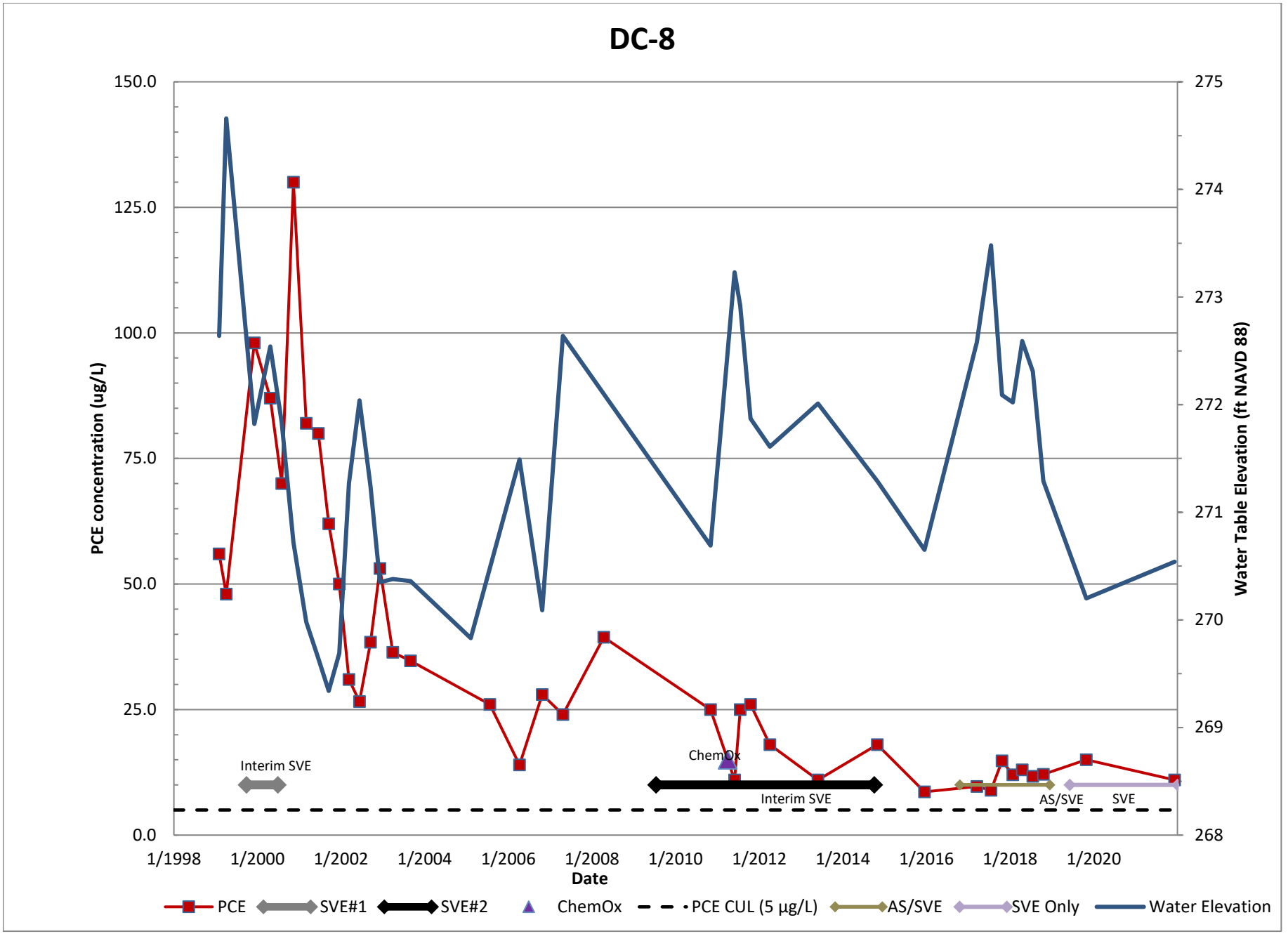
1. All results in µg/m^3 (micrograms per cubic meter).
2. U = not detected at or above the method reporting limit shown.
3. - = not applicable
4. Commercial remediation screening levels (SLs) for tetrachloroethene, trichloroethene, and vinyl chloride have been calculated using Equation 750-2 (Washington Administrative Code 173-340-750). Per Ecology's *Frequently Asked* Questions (FAQs) Regarding *Vapor Intrusion (VI) and Ecology's Guidance Implementation Memorandum No. 21 (November 1, 2018)* , an exposure frequency (EF) factor of 0.3 was used (instead of 1.0) to reflect a commercial exposure of 52 weeks at 50 hours per week. Ecology has not assigned vapor intrusion SLs to cis- and trans-1,2-dichloroethene.
5. Detected concentrations are shown in **bold.**
6. Concentrations exceeding the commercial remediation screening level are **bold and shaded**.
7. Only tetrachloroethene and breakdown daughter products are shown. See lab reports for other detected VOCs unrelated to tetrachloroethene including acetone, carbon disulfide, chloroform, chloromethane, 1,2-dichlorobenzene, 1,1-dichloroethene, 1,4-dioxane, ethanol, ethylbenzene, trichlorfluoromethane, dichlororfluoroethane, hexane, methylene chloride, 2-butanone, isopropyl alcohol, 1-propene, styrene, tetrahydrofuran, toluene, 1,1,1-trichloroethane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, m,p-xylene, and o-xylene.
8. SVS-10 and SVS-11 were collected beneath the slab in Four Star Cleaners on MVSC Property.
9. SVS-12, SVS-13, SVS-14, SVS-15, and SVS-16 were collected beneath the slab in Archies Restaurant on Harris Property. The sample from SVS-12 was not analyzed in March 2019 due to leakage in the sampling train. SVS-16 was not sampled in June 2019 due to floor wax in sampling probe tip.
10. SVS-17 was collected beneath the aspalt paved alley behind Four Star Cleaners on MVSC Property.

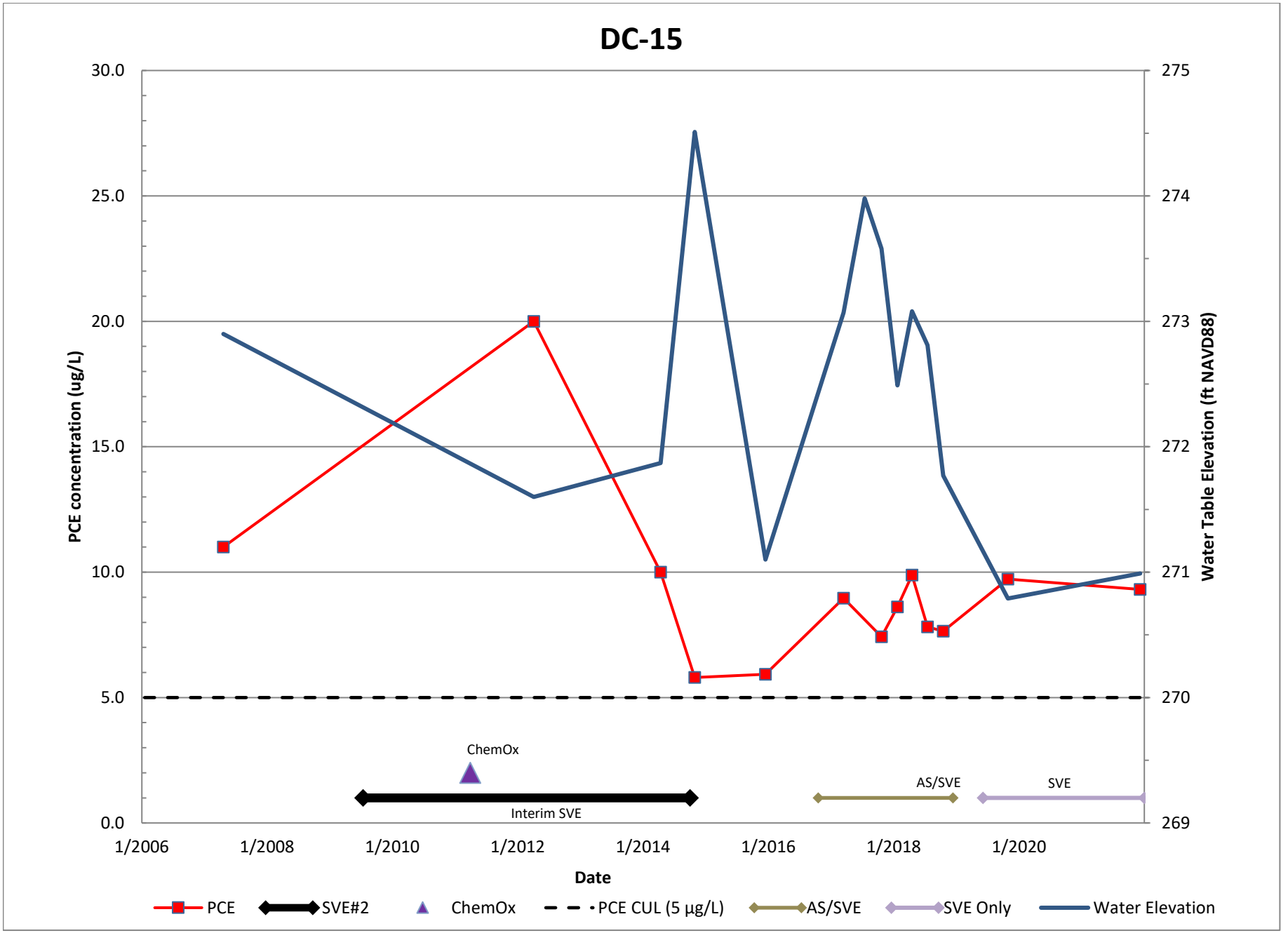
ATTACHMENT D

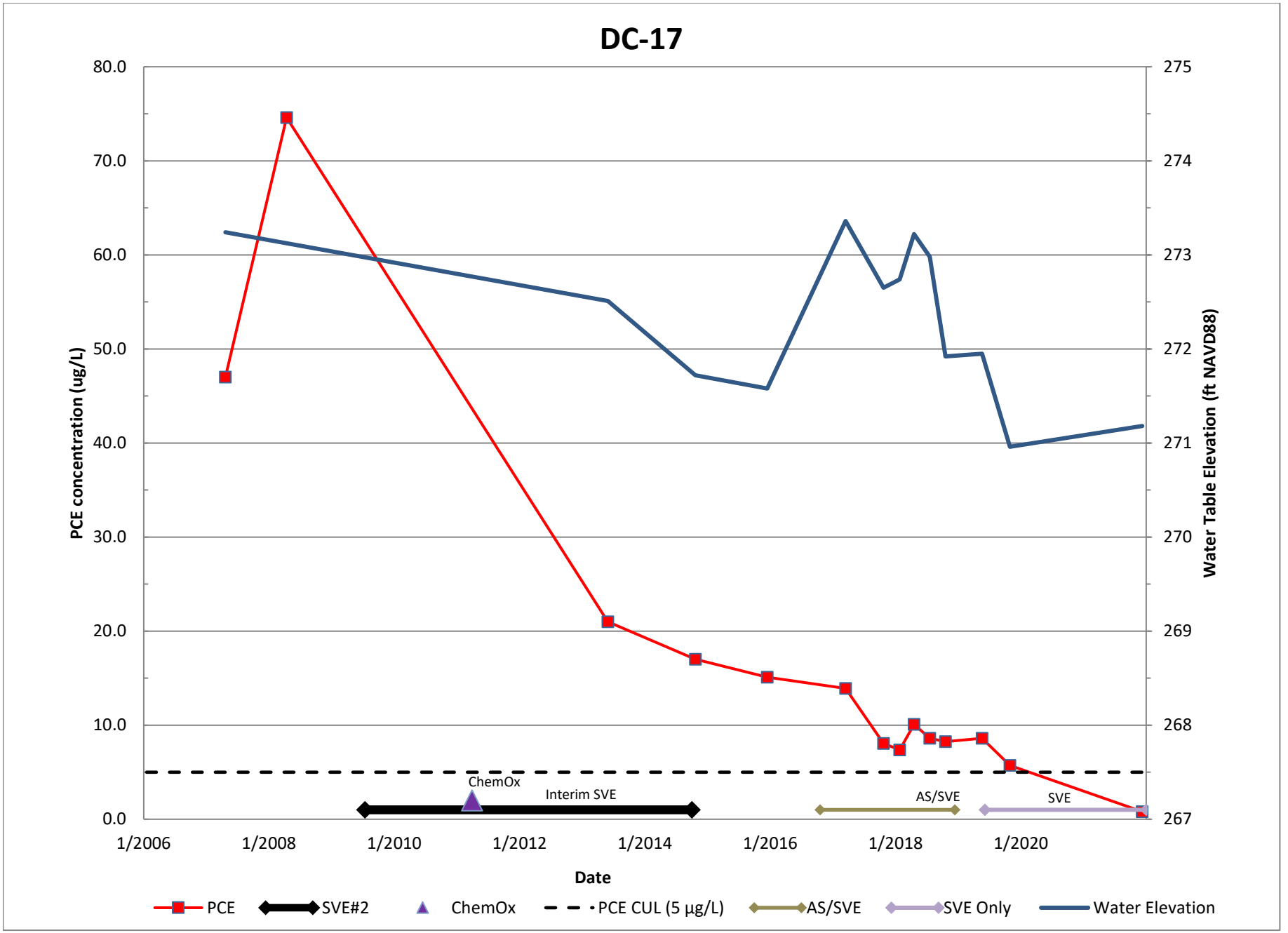
TIME TREND PLOTS

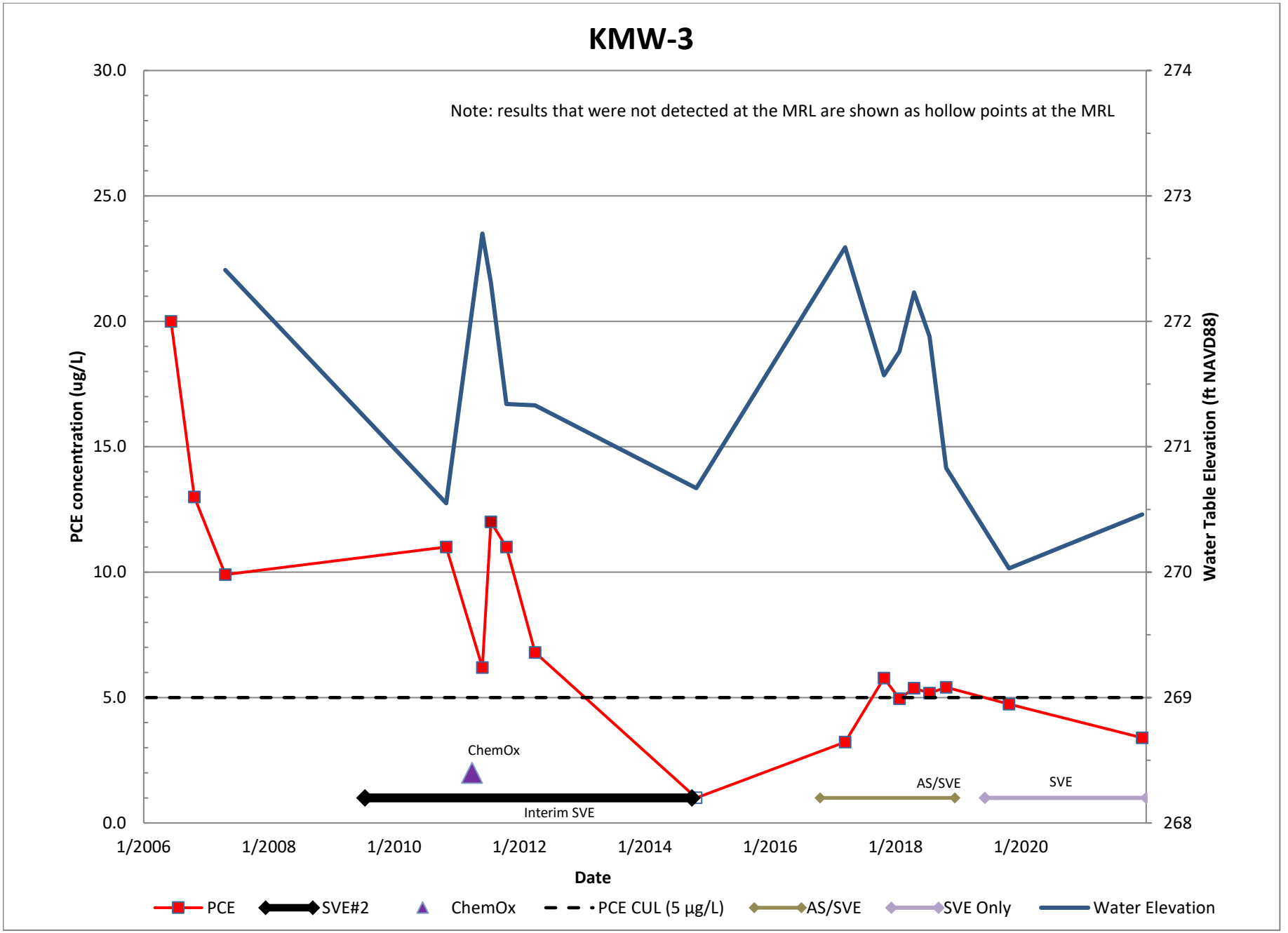
- MW-4, MW-7, MW-10, MW-11
- DC-4, DC-7, DC-8, DC-10a, DC-15, DC-17
- KMW-3, KMW-8

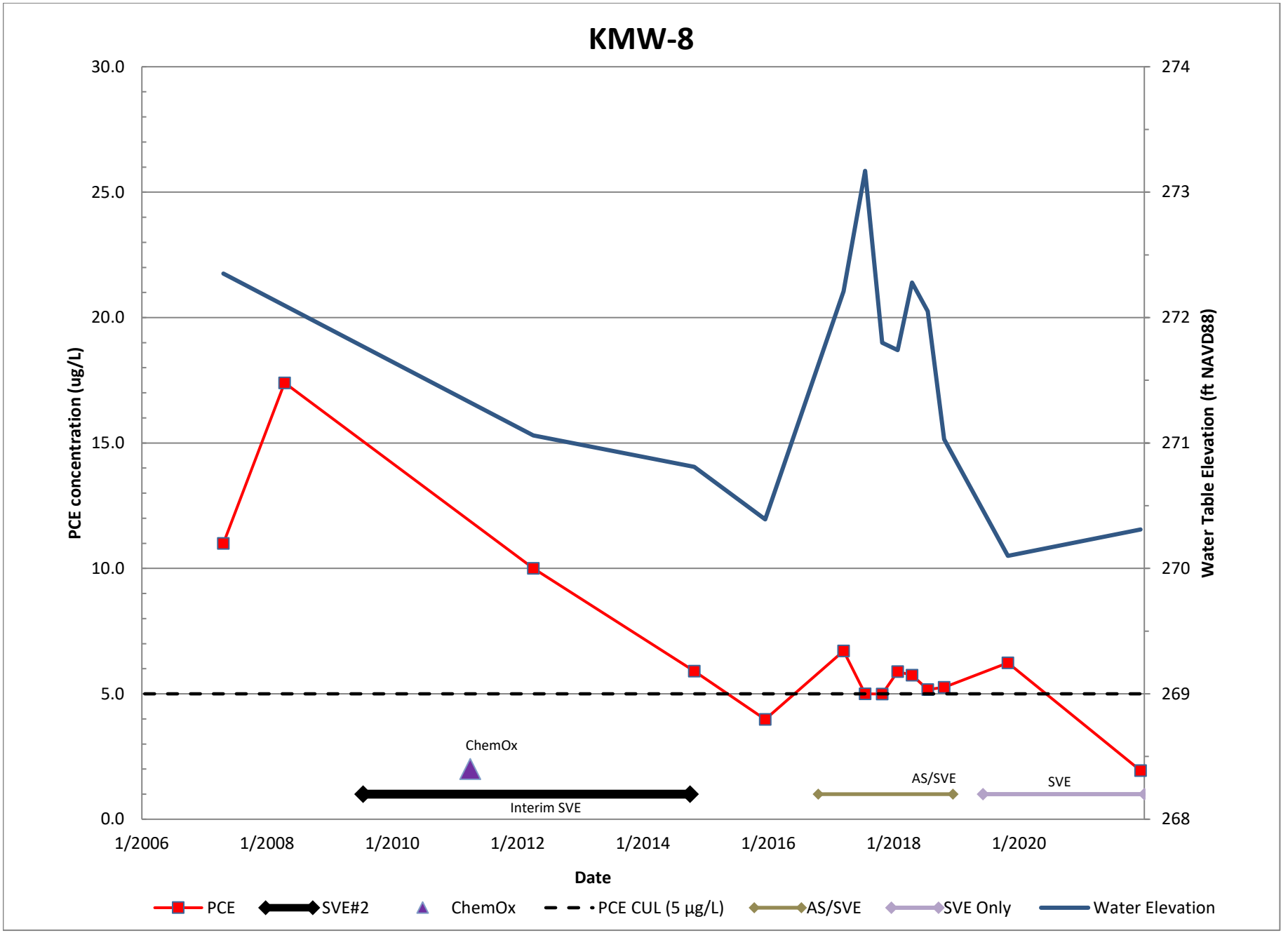

DC-7
PCE concentration (ug/L)
Water Table Elevation (ft NAVD 88)
150.0
125.0
100.0
75.0
50.0
25.0
0.0
275
274
273
272
271
270
269
268
267
266
265
264
263
1/1998
1/2000
1/2002
1/2004
1/2006
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
Date
Interim SVE
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#1
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation

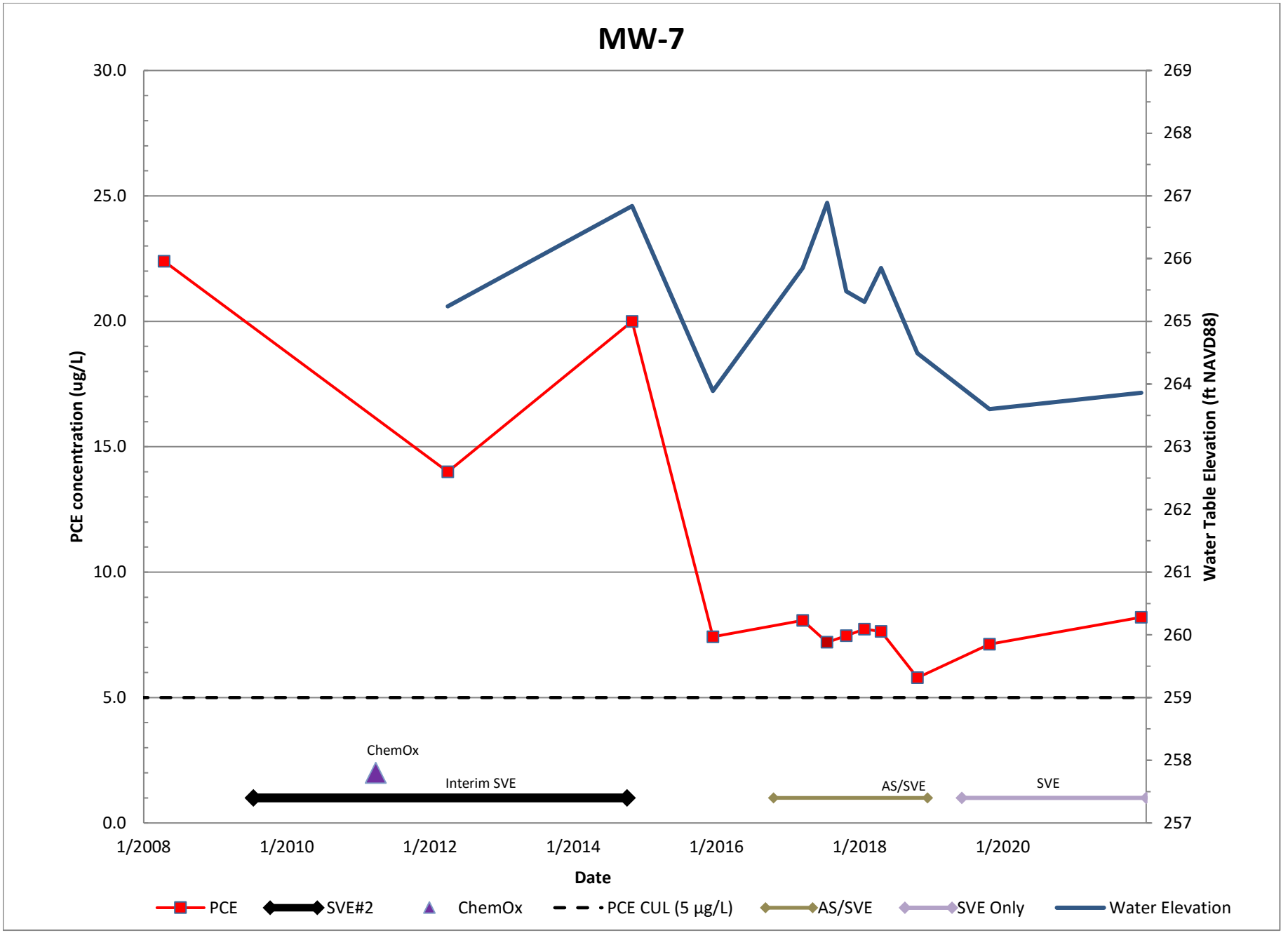

DC-8
PCE concentration (ug/L)
Water Table Elevation (ft NAVD 88)
Date
150.0
125.0
100.0
75.0
50.0
25.0
0.0
275
274
273
272
271
270
269
268
1/1998
1/2000
1/2002
1/2004
1/2006
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
Interim SVE
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#1
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation

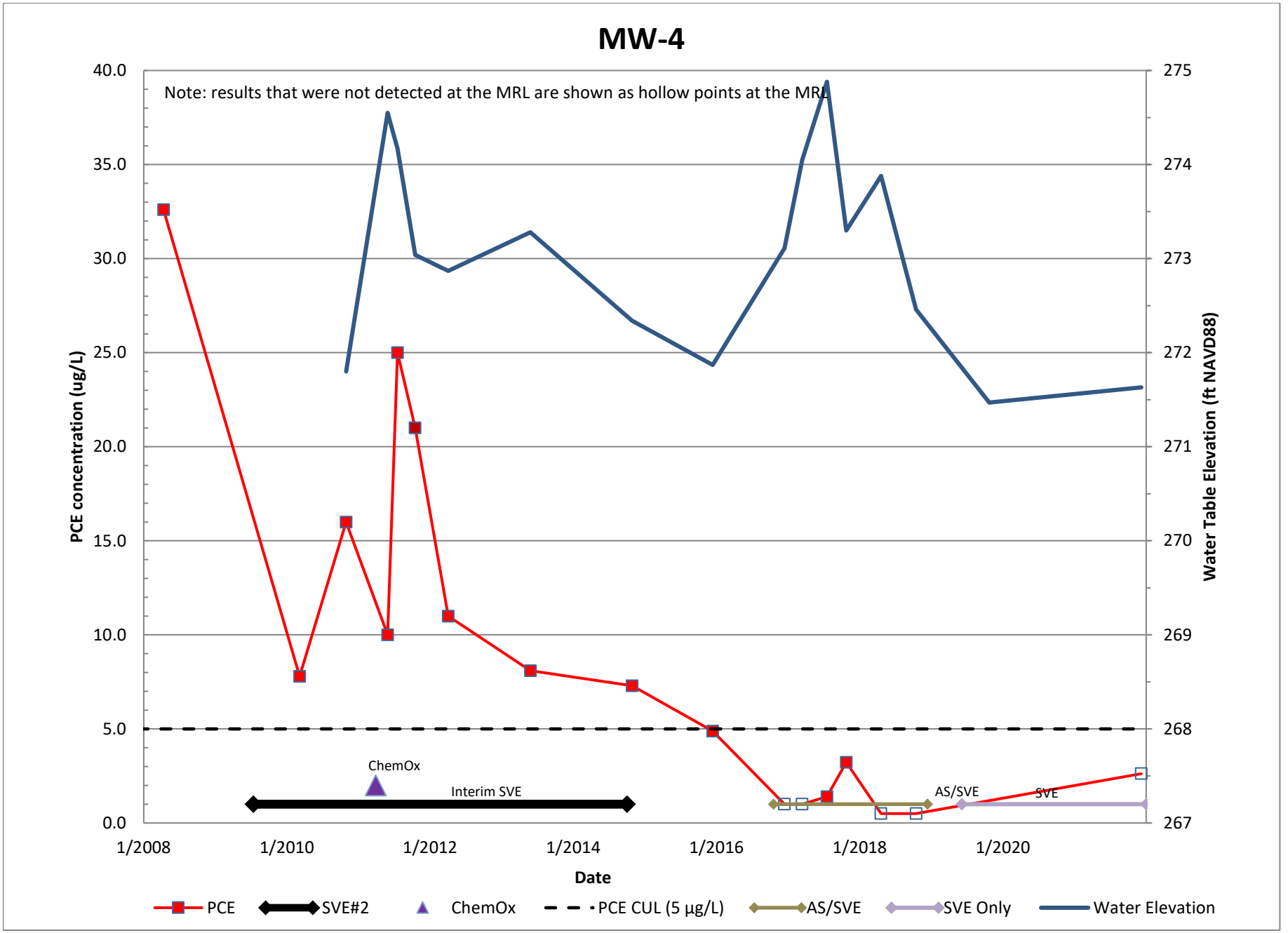

DC-15
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
275
274
273
272
271
270
269
1/2006
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
Date
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation

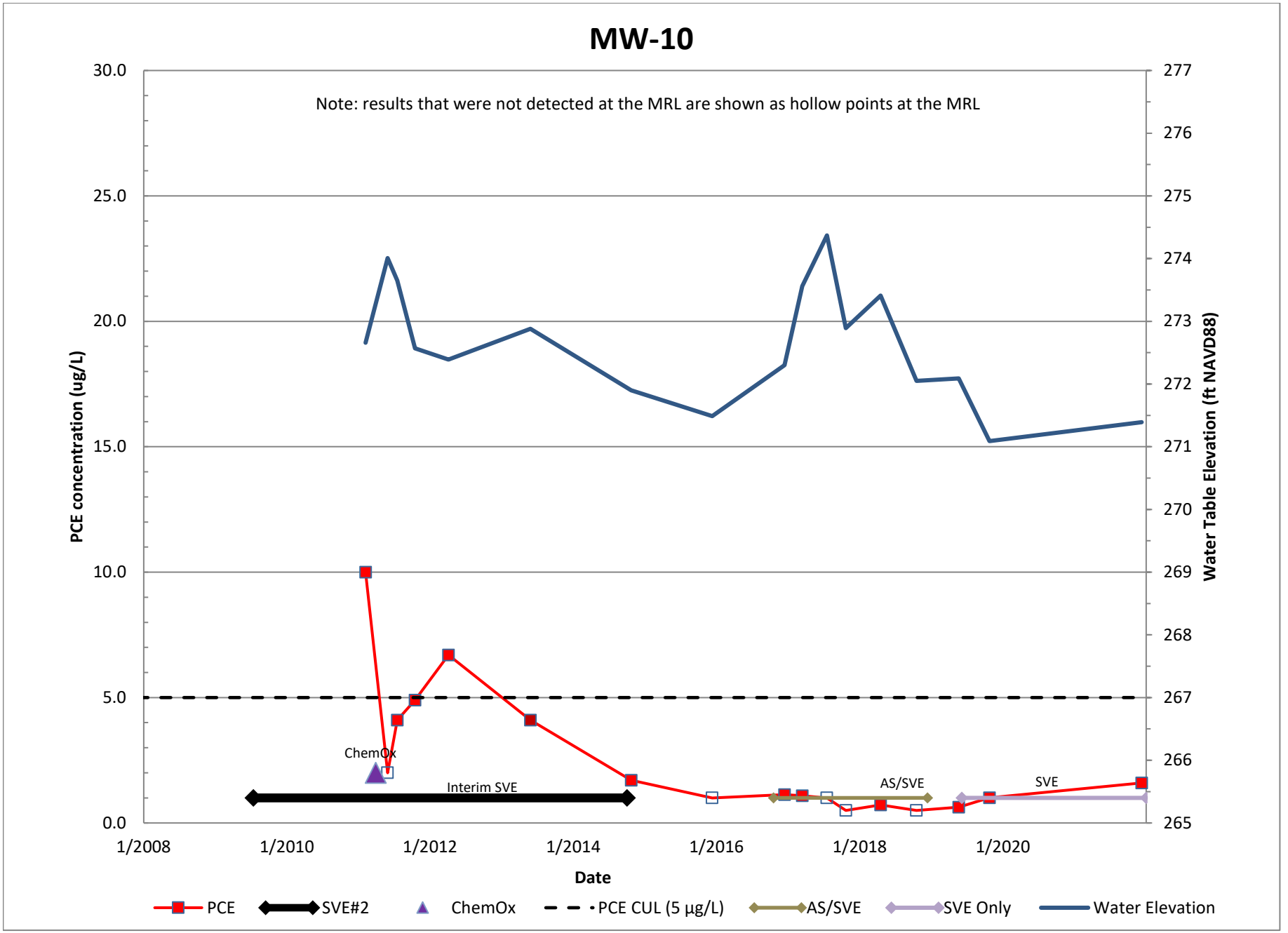

DC-17
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
275
274
273
272
271
270
269
268
267
1/2006
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
Date
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation

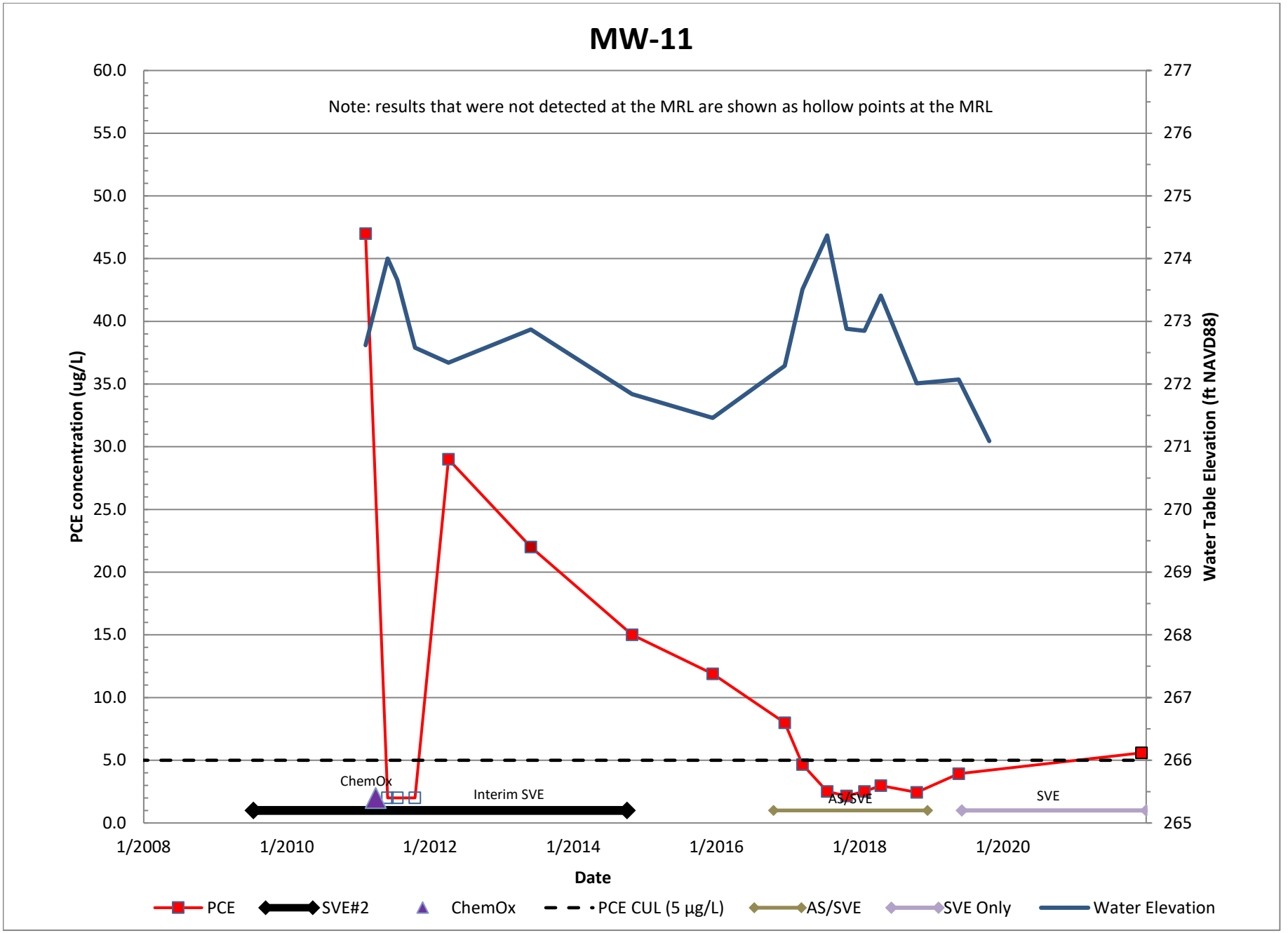

KMW-3
Note: results that were not detected at the MRL are shown as hollow points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
274
273
272
271
270
269
268
1/2006
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
Date
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation

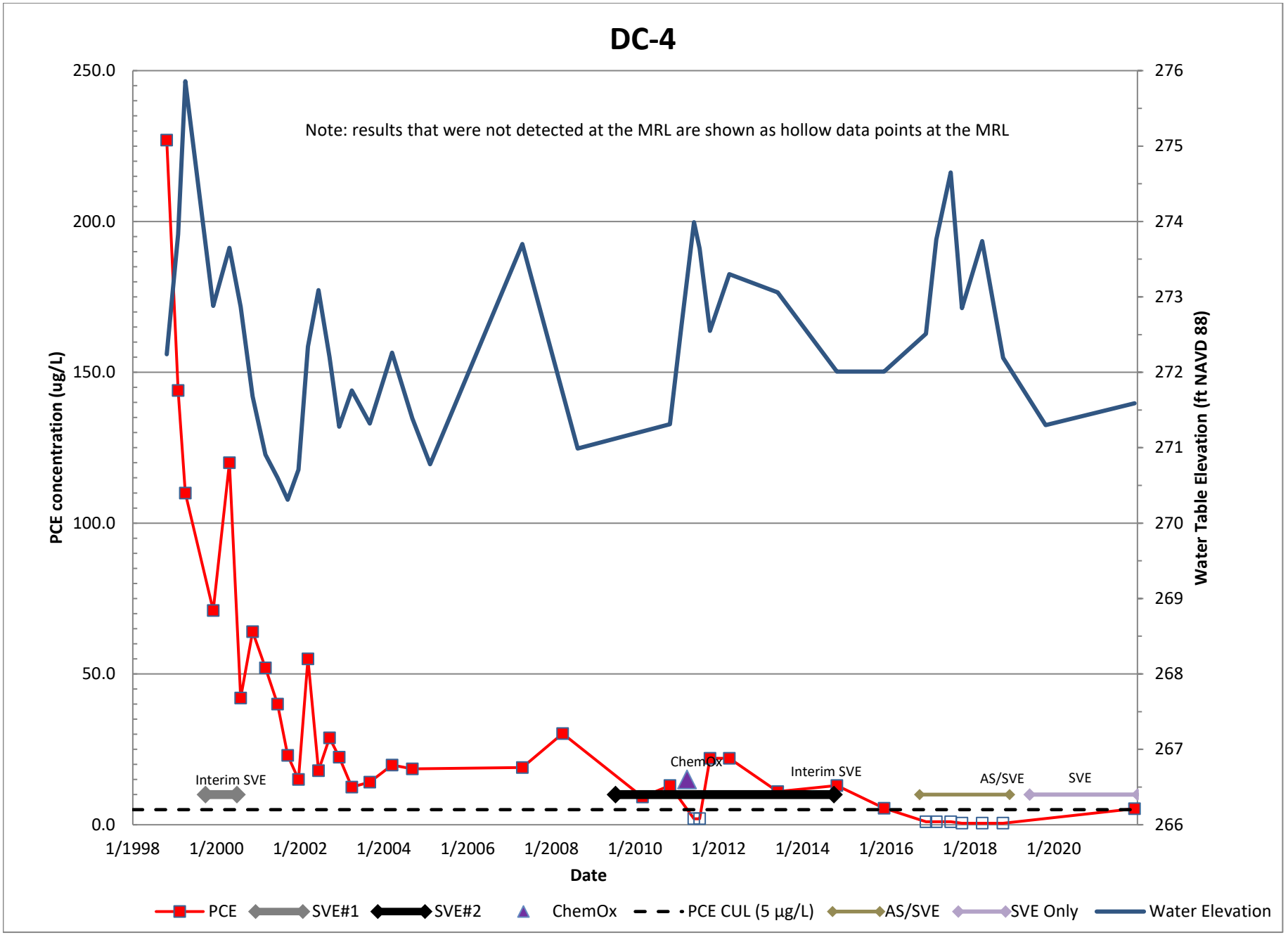

KMW-8
30.0
25.0
20.0
15.0
10.0
5.0
0.0
PCE concentration (ug/L)
274
273
272
271
270
269
268
Water Table Elevation (ft NAVD88)
1/2006
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
Date
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation

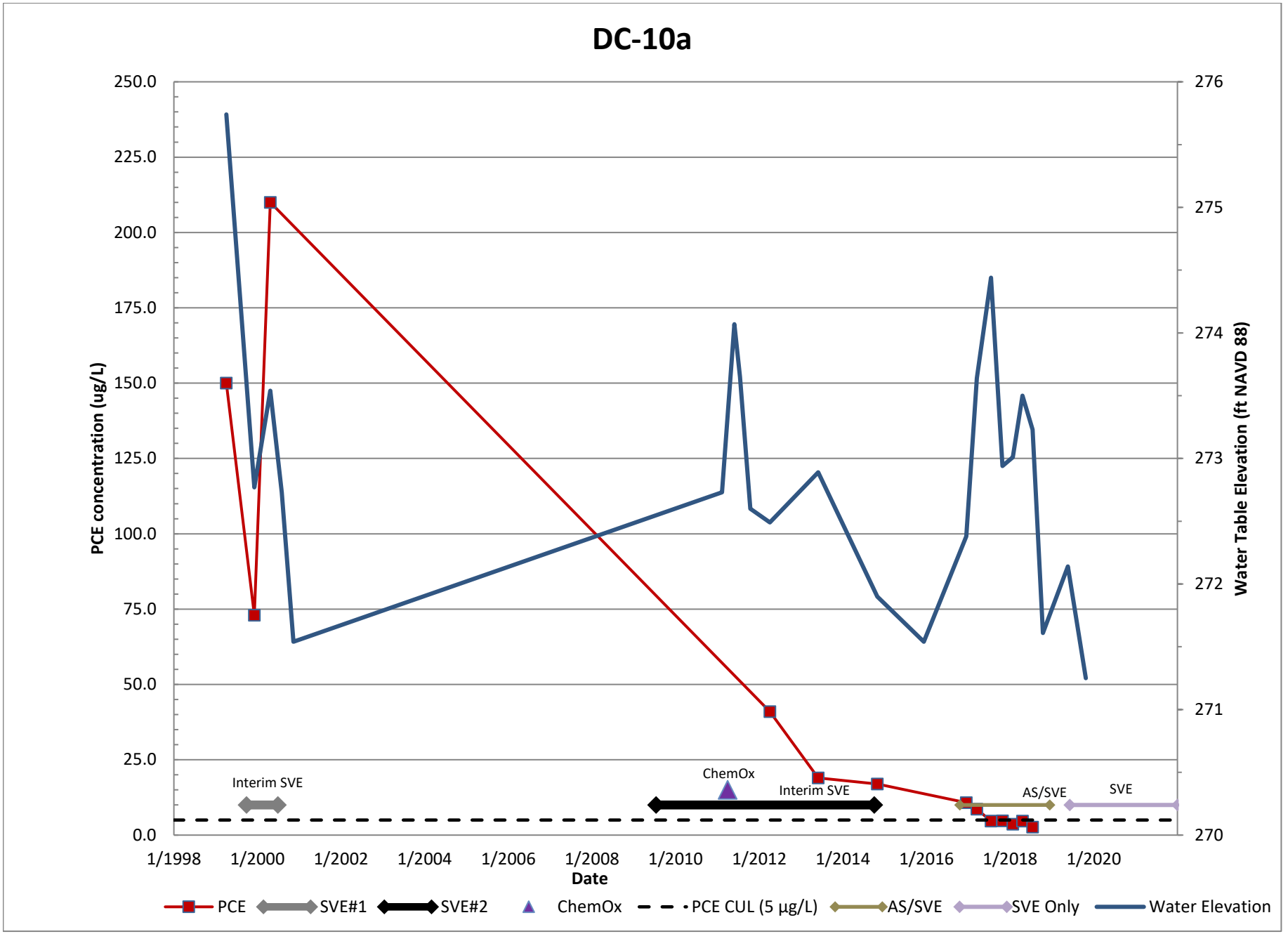

MW-7
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
269
268
267
266
265
264
263
262
261
260
259
258
257
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
Date
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation


MW-4
Note: results that were not detected at the MRL are shown as hollow points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
275
274
273
272
271
270
269
268
267
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
Date
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation


MW-10
Note: results that were not detected at the MRL are shown as hollow points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
Date
30.0
25.0
20.0
15.0
10.0
5.0
0.0
277
276
275
274
273
272
271
270
269
268
267
266
265
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation


MW-11
Note: results that were not detected at the MRL are shown as hollow points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
Date
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
277
276
275
274
273
272
271
270
269
268
267
266
265
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation


DC-4
Note: results that were not detected at the MRL are shown as hollow data points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD 88)
Date
250.0
200.0
150.0
100.0
50.0
0.0
276
275
274
273
272
271
270
269
268
267
266
1/1998
1/2000
1/2002
1/2004
1/2006
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
Interim SVE
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#1
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation


DC-10a
PCE concentration (ug/L)
Water Table Elevation (ft NAVD 88)
Date
250.0
225.0
200.0
175.0
150.0
125.0
100.0
75.0
50.0
25.0
0.0
276
275
274
273
272
271
270
1/1998
1/2000
1/2002
1/2004
1/2006
1/2008
1/2010
1/2012
1/2014
1/2016
1/2018
1/2020
Interim SVE
ChemOx
Interim SVE
AS/SVE
SVE
PCE
SVE#1
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
SVE Only
Water Elevation