JUNE/JULY 2019 MONITORING REPORT

PACIFIC CITY PARK
600 THIRD AVENUE SOUTHEAST
PACIFIC, WASHINGTON

King County

River and Floodplain Management Section
Water and Land Resources Division

Note:
Some pages in this document have been purposely skipped or blank pages inserted so that this document will copy correctly when duplexed.

JUNE/JULY 2019 MONITORING REPORT

PACIFIC CITY PARK
600 THIRD AVENUE SOUTHEAST
PACIFIC, WASHINGTON

Prepared for

King County

River and Floodplain Management Section
King County Water and Land Resources Division
201 South Jackson Street, Suite 600
Seattle, Washington 98104

Prepared by
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Seattle, Washington 98121
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In Conjunction with
Aspect Consulting, LLC

October 1, 2019

Prepared for:

King County River and Floodplain Management Section
King County Water and Land Resources Division

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Alternate Formats Available.

Call 206-477-4812 **or TTY 711**

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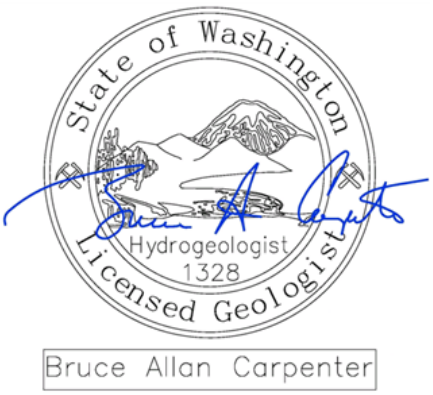
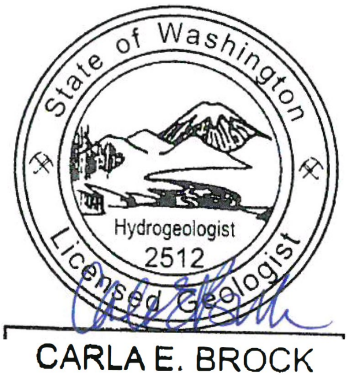
CERTIFICATE OF LICENSED HYDROGEOLOGIST

This document has been prepared under the supervision of a licensed hydrogeologist.



Bruce Carpenter, LHG — October 1, 2019

Name — Date



Carla Brock, LHG — October 1, 2019

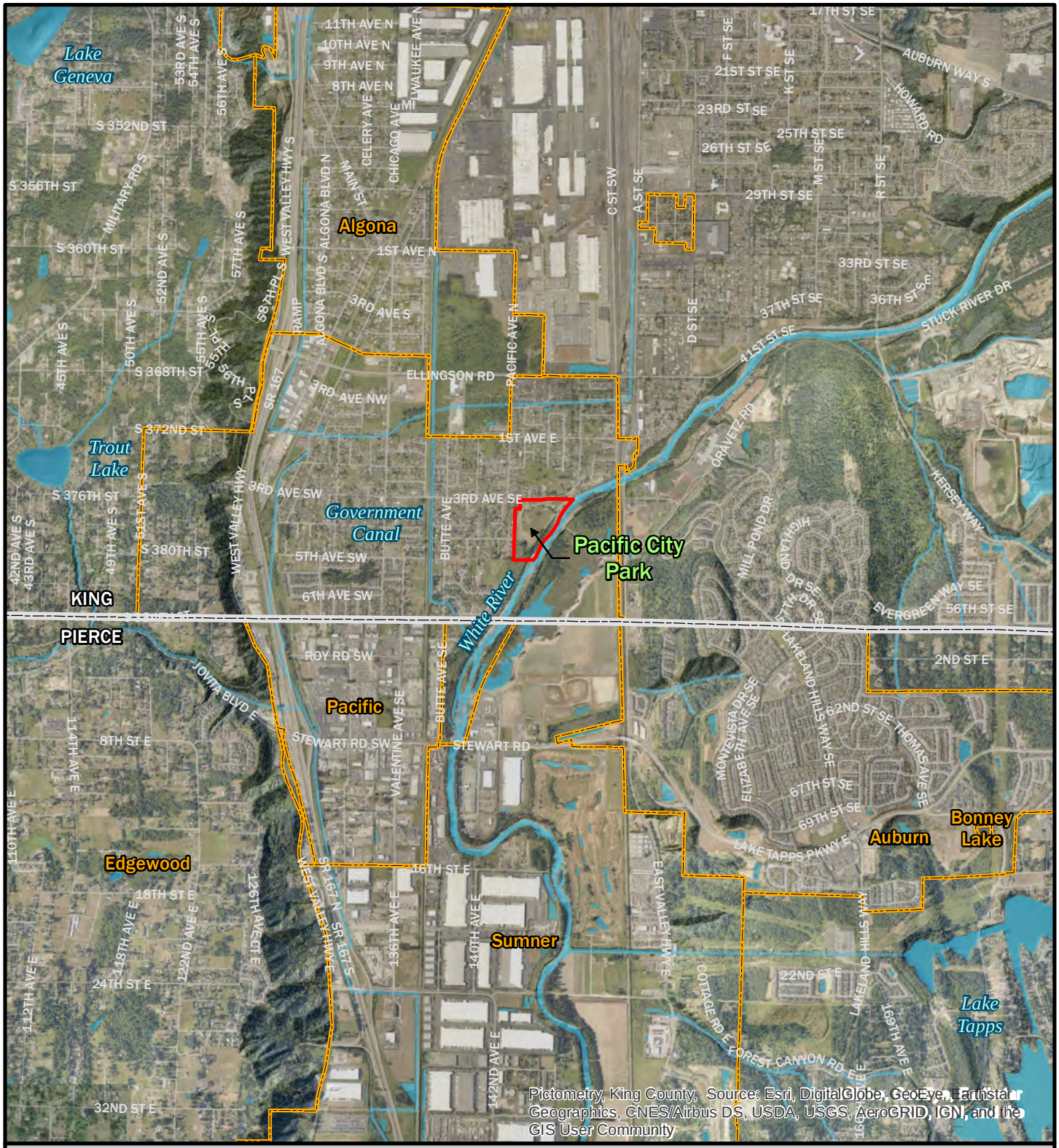
Name — Date

1. INTRODUCTION

This report documents the results of quarterly groundwater, surface water, and soil vapor monitoring completed in June and July 2019 for the Pacific City Park, located at 600 Third Avenue Southeast in Pacific, Washington (herein referred to as the Site; Figure 1). This report supplements the Remedial Investigation (RI) Report (Herrera 2019a), the Supplemental RI (SRI) Report (Herrera 2019b), and the March 2019 Monitoring Report (Herrera 2019c) submitted by King County to the Washington State Department of Ecology (Ecology). The Site was an informal dumpsite and city dump between approximately 1921 and 1965 and is defined as any location where one or more of the contaminants of potential concern (COPCs) associated with the dumpsite are present in Site media at concentrations exceeding the screening levels developed for the RI.

The June/July 2019 monitoring was conducted to further evaluate the nature and extent of hazardous substances in groundwater, surface water, and soil vapor at the Site and to support the development, selection, and implementation of a cleanup action. Four quarters or more of groundwater monitoring have been completed for wells MW-1 through MW-9 (Figure 2). The June/July 2019 monitoring was the fifth quarterly sampling event for surface water at the Site, and the third quarterly sampling event for wells MW-10 through MW-12 that were installed in December 2018 during the Supplemental RI. One additional monitoring event is planned for groundwater and soil vapor at the Site in September 2019.

King County is performing work at the Site to meet the requirements of the Model Toxics Control Act cleanup regulation (MTCA) Cleanup Regulation, Chapter 173-340 WAC, for an RI and feasibility study (FS), in order to select and implement a cleanup action alternative. The quarterly monitoring is being performed to collect data and information on the seasonal variability of conditions at the Site to inform the RI.



Legend

- Study area
- County boundary
- City limits
- Waterbody
- Stream (King County)
- Roads

Figure 1.
Vicinity Map, Pacific City Park, Pacific, Washington

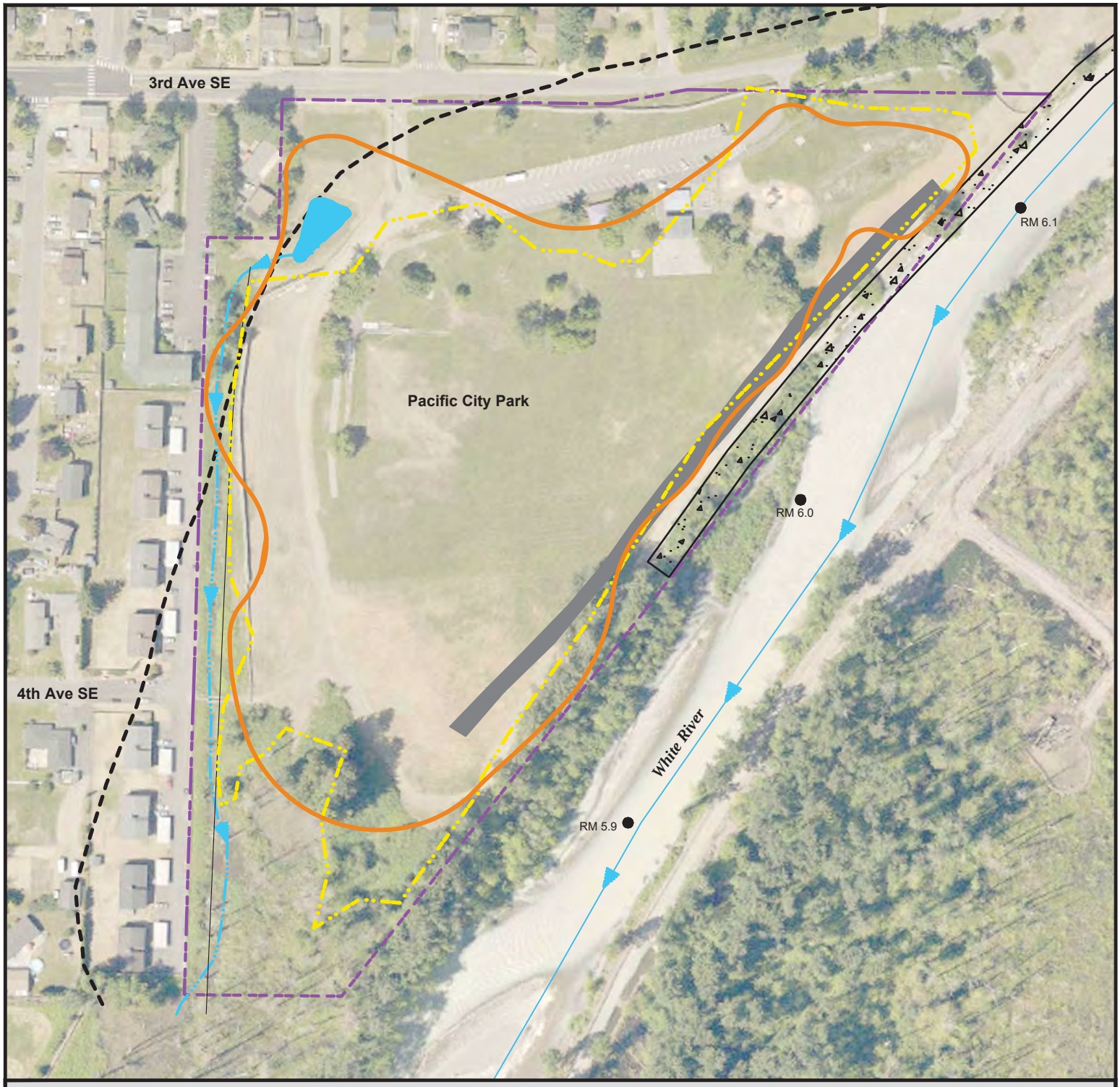
0 1,500 3,000 6,000 Feet

King County

N

Aerial: King County (2017)
Prepared for King County by Herrera

K:\Projects\Y2017\17-06520-000\Project\Report\RtFig1_GWVicinityMap_letter.mxd (1/7/2019)



Legend

- Park boundary
- Pacific City Park MTCA site boundary
- Historical edge of river channel based on 1936 aerial photograph (source: King County)
- Approximate lateral extent of fill at Pacific City Park
- Existing stormwater pond
- Existing concrete revetment
- Existing stormwater ditch
- Linear feature identified during 2018 geophysical survey in vicinity of historic levee
- RM 6.0 River mile (10th)

Figure 2.
Site Map, Pacific City Park, Pacific, Washington.

0 100 200 400 Feet

N

King County

Aerial source: King County (2017)

O:\proj\Y2017\17-06520-000\CAD\Dwg\Supplemental RI\Fig2_Site Map - Layout1.dwg

1.1. General Site Information

Site Name	Pacific City Park
Site Address	600 Third Avenue Southeast
Facility Site Identification number (FSID)	2160
King County Assessor's Parcel No.	3621049040
Cleanup Site ID	21
VCP Project Number	NW3204
Ecology Site Manager	Grant Yang

The project consultant is Mark Ewbank with Herrera Environmental Consultants, Inc. (Herrera), located at 2200 Sixth Avenue, Suite 1100, Seattle, Washington 98121. Telephone: 206-787-8217, and email: MEwbank@herrerainc.com.

Pacific City Park is owned by King County, with a portion, approximately 21 acres, leased to the City of Pacific for use as a City park. Mary Strazer, Senior Engineer with the River and Floodplain Management Section of the King County Water and Land Resources Division, is the Site contact. Her office is located at 201 South Jackson Street, Suite 600, Seattle, Washington 98104. Telephone: 206-263-5817, and email: mstrazer@kingcounty.gov.

2. METHODS

Herrera staff collected groundwater samples from eight monitoring wells, including the three monitoring wells installed during the Supplemental RI (MW-10 through MW-12), and five wells (MW-2, MW-4 through MW-6, and MW-9) located within or downgradient of areas where refuse was historically placed at the Site.

In addition, Herrera collected surface water samples from four locations within the stormwater pond and ditch on the Site and monitored soil gas at three monitoring wells where the static groundwater level was lower than the top of the well screen.

The work was conducted in general accordance with the Sampling and Analysis Plan (SAP) (Herrera 2018). The locations of all soil borings and monitoring wells previously completed at the Site are depicted on Figure 3; surface water sampling locations are depicted on Figure 4; and soil vapor monitoring locations are depicted on Figure 5.

2.1. GROUNDWATER SAMPLING

On June 18, 2019, Herrera staff collected groundwater samples from eight monitoring wells (MW-2, MW-4 through MW-6, and MW-9 through MW-12) and hand delivered them to OnSite Environmental, Inc. (OnSite) for laboratory analysis (see Figure 3). The samples were submitted for analysis of:

- Volatile organic compounds (VOCs) by EPA Method 8260C
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270D/SIM
- Dissolved MTCA metals by EPA Methods 200.8/7470A

In addition, samples from the three newer wells (MW-10 through MW-12) installed during the Supplemental RI were submitted for analysis of:

- Gasoline-range total petroleum hydrocarbons (TPH) by Ecology Method NWTPH-Gx
- Diesel-and oil-range TPH by Ecology Method NWTPH-Dx

All samples were collected by the low-flow purge method described in the SAP (Herrera 2018) and dissolved metals samples were field filtered. Samples were held for potential analysis of polychlorinated biphenyls (PCBs) pending the results of oil-range TPH analysis; no oil-range petroleum hydrocarbons were detected, so subsequent PCB analysis was not performed.

2.2. SURFACE WATER SAMPLING

On July 10, 2019, Herrera staff collected surface water samples from four locations (SW1 through SW4) including the onsite stormwater pond and along the stormwater ditch (see Figure 4). The samples were collected during a storm event and included stormwater runoff to the pond and ditch from adjacent upland areas and parking lot at the Site, portions of Third Avenue Southeast, and parking lots and pavement adjacent to Fourth Avenue Southeast. The surface water samples were submitted to OnSite for the following laboratory analyses:

- Gasoline-range TPH by Ecology Method NWTPH-Gx
- Diesel- and oil-range TPH by Ecology Method NWTPH-Dx
- Dissolved MTCA metals by EPA Methods 6010C/200.8/7470A
- cPAHs by EPA Method 8270D/SIM
- VOCs and BTEX by EPA Method 8260C
- Hardness by EPA Method 6010D/SM 2340B

The samples were collected in the same manner as previous surface water samples collected at the Site, which generally follows the King County Standard Operating Procedure (SOP) *Sampling Methods for Stream and River Water (SOP #214v3)*. Samples for analysis of dissolved metals were collected using a peristaltic pump and were field filtered prior to submittal to the laboratory. Two samples (SW1 and SW4) with detected concentrations of lube oil-range petroleum hydrocarbons were also analyzed for PCBs.

2.3. SOIL VAPOR MONITORING

On June 18, 2019, during the quarterly groundwater sampling event, soil gas monitoring was conducted at four locations (MW-6, MW-9, MW-11, and MW-12) (Figure 6). These were the only wells where the static groundwater level was lower than the top of the well screen. Soil gas monitoring was performed using a Landtec Gas Analyzer & Extraction Monitor (GEM) 2000 Plus gas analyzer and extraction monitor that was calibrated by the supplier prior to use. The wells were purged during monitoring using an Aircheck Sampler pump by SKC, Ltd. at a rate of approximately 3,000 milliliters per minute (ml/min).

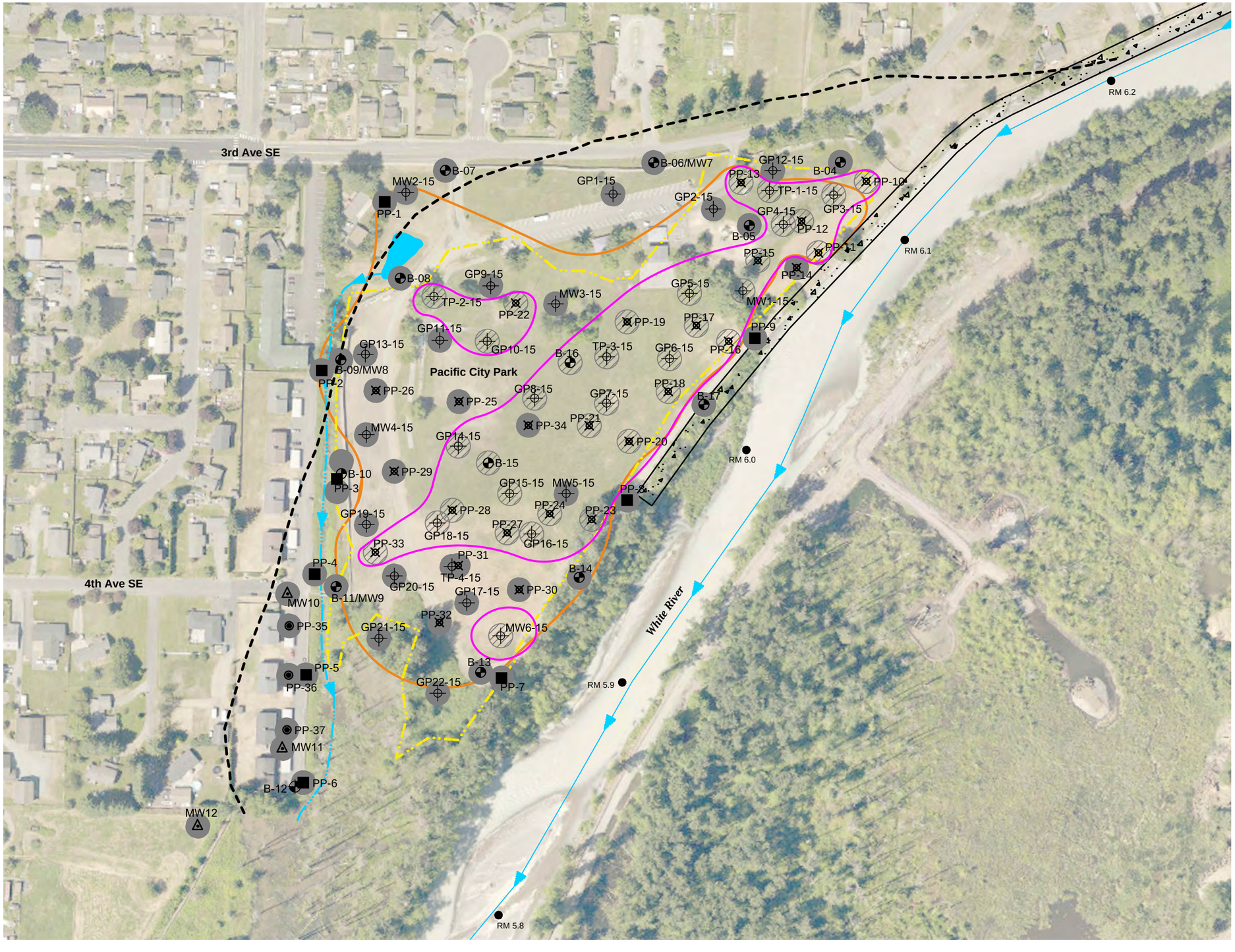


Figure 3.
Extent of Fill Soil Containing Refuse, and Soil Boring and Monitoring Well Locations, Pacific City Park, Pacific, Washington.

Legend

- Historical edge of river channel based on 1936 aerial photograph (source: King County)
- Pacific City Park MTCA site boundary
- Existing concrete revetment
- Existing stormwater pond
- Existing stormwater ditch
- RM 6.0 River mile (10th)
- Probe location (Herrera, 5-2017)
- Probe/well/test pit location (Shannon & Wilson, 9-2015)
- Geotech boring location (Aspect 2-2018, 3-2018)
- Probe location (Herrera 2-2018, 3-2018)
- Probe location (Herrera 12-2018)
- Monitoring well location (12-2018)
- Approximate lateral extent of fill at Pacific City Park
- Approximate lateral extent of refuse
- Fill identified on boring log
- Refuse and fill identified on boring log

Notes

1. Geotechnical boring B-12 is shown on this figure and figure 6 only, no environmental samples were collected.

0 100 200 400 Feet

N

King County

Aerial source: King County (2017)

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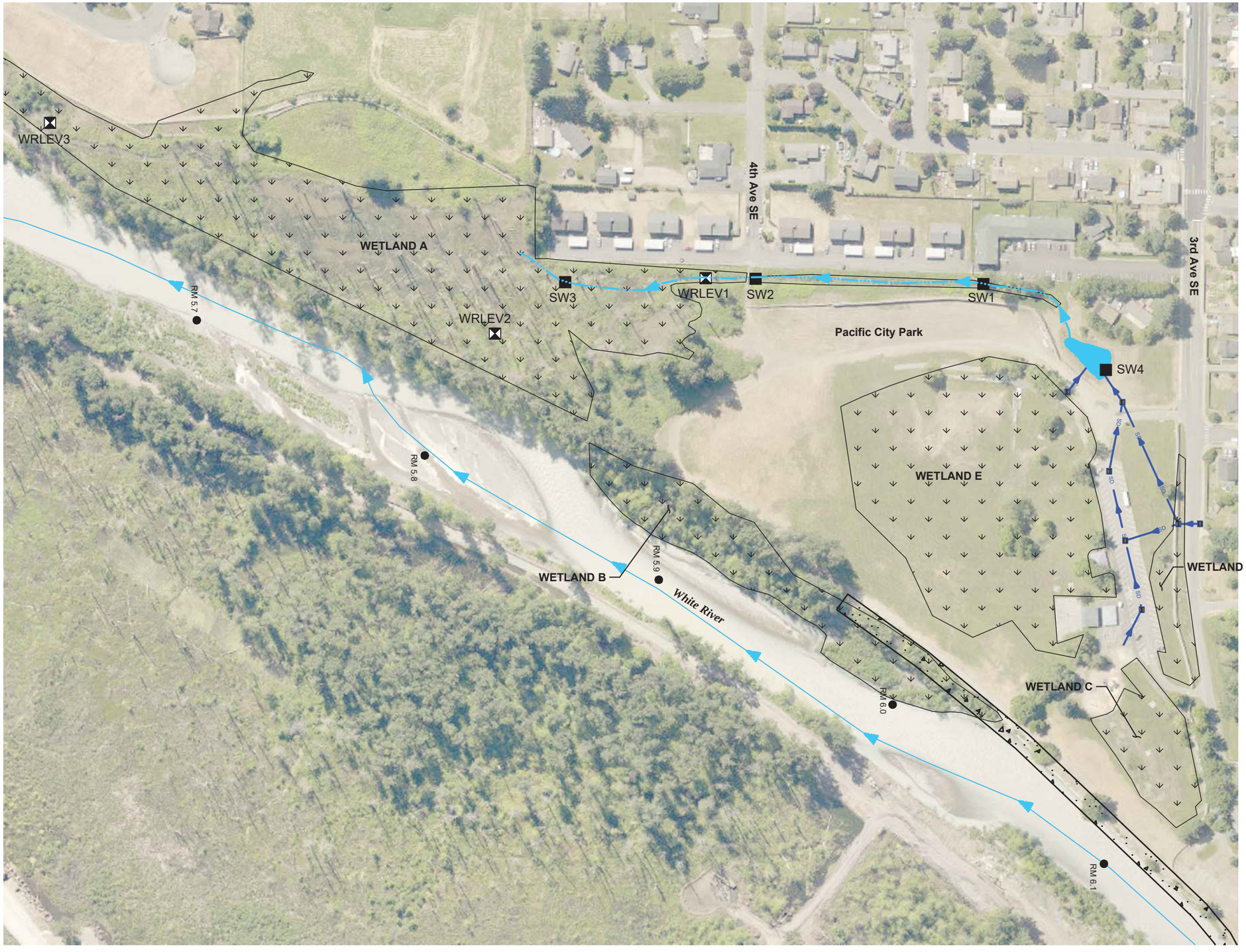

Figure 4.
Wetlands, Stormwater Conveyance Features, and Surface Water Sample Locations, Pacific City Park, Pacific, Washington.

Legend

- Existing storm drain line
- Existing wetland
- Existing stormwater pond
- Existing concrete revetment
- Existing stormwater ditch
- Existing catch basin
- SW# / WRLEV# — Sample location
- RM 6.0 — River mile (10th)

Notes

1. Study area for surface water samples extends south of park to include King County 2010 and 2011 sampling.

0 100 200 400 Feet

King County

N

Aerial source: King County (2017)

O:\proj\Y2017\17-06520-000\CAD\Dwg\Supplemental R1\Fig_Surface water sample locs - 11x17 land.dwg

Legend

- Historical edge of river channel based on 1936 aerial photograph (source: King County)
- Existing concrete revetment
- Probe/well/test pit location (Shannon & Wilson, 9-2015)
- Geotech boring location (Aspect 2-2018, 3-2018)
- Soil vapor monitoring location approximated from the Abandon Landfill Study in King County. Seattle-King County Department of Public Health, April 30, 1985
- Monitoring well location (12-2018)
- RM 6.0 River mile (10th)

Figure 5.
Soil Vapor Monitoring Locations, Pacific City Park, Pacific, Washington.

0 100 200 400 Feet

N

King County

Aerial source: King County (2017)

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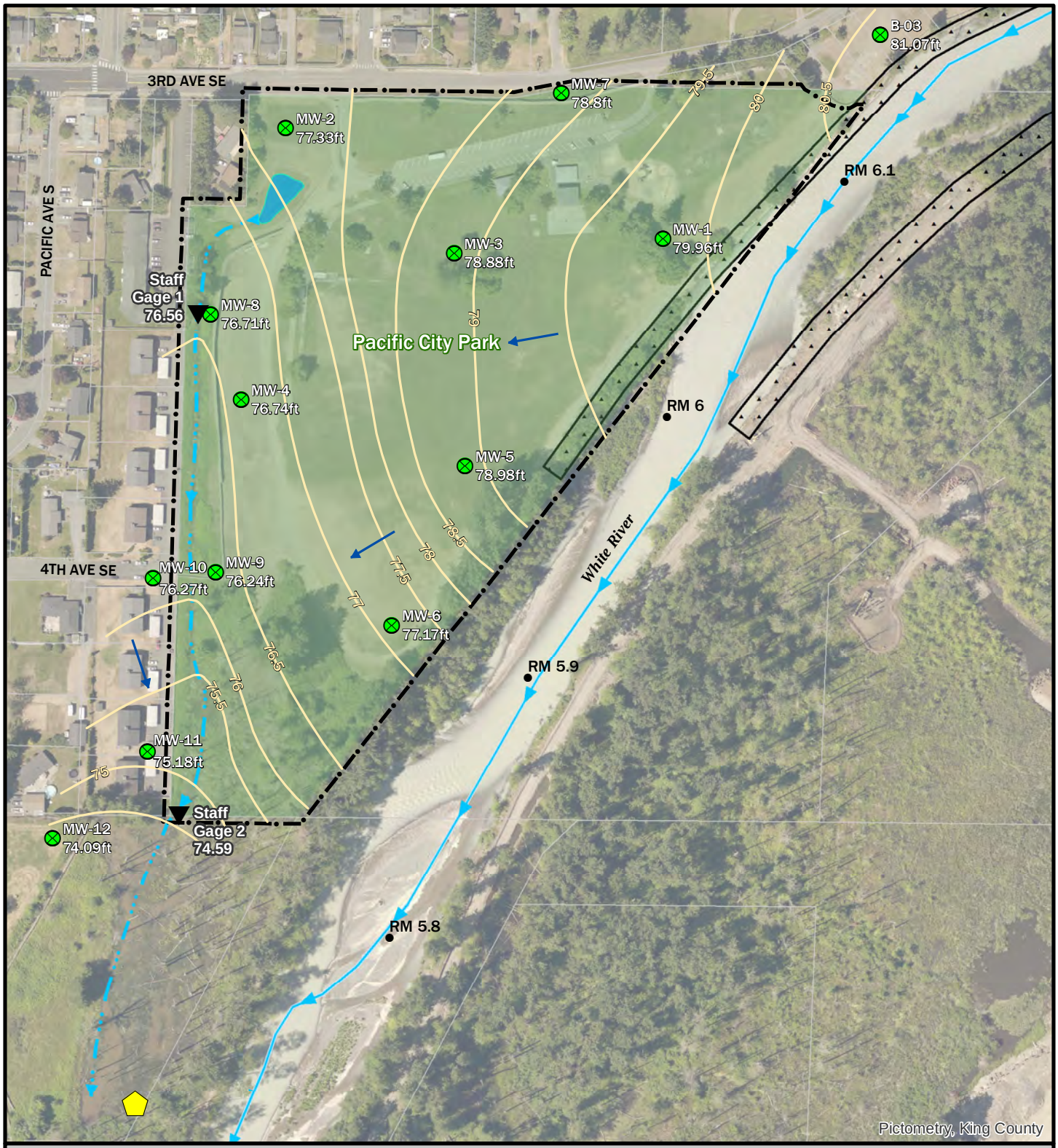

Legend

- Estimated direction of groundwater flow
- Groundwater contour
- Study area
- Existing monitoring wells
- Barometric pressure sensor
- Staff gage
- River mile (10th)
- River

76.19 ft - Elevation of groudwater in feet NAVD88

- Stormwater ditch
- Stormwater pond
- Park
- Concrete revetment
- Parcels

Figure 6.
Groundwater Elevation Contour Map, June 18, 2019, Pacific City Park, Pacific, Washington.

0 125 250 500 Feet

King County

N

Aerial: King County (2017)
Prepared for King County by Herrera
Vertical datum: NAVD88

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3. RESULTS

The analytical results for samples collected in June and July 2019 are compared to the Site Screening Levels (SSLs) developed in the RI Report based on current and potential future exposure pathways and receptors (Herrera 2019a).

3.1. GROUNDWATER CONDITIONS

On June 18, 2019, static groundwater levels were measured in monitoring wells MW-1 through MW-12 and B-03 (Figure 6) and ranged from near the ground surface (1.02 foot below the top of the monitoring well casing [bTOC]) to 6.64 feet bTOC (Table 1; all tables appear in a separate section following the main report text). Surface water elevations were also measured at two locations within the stormwater ditch, at Staff Gage 1 near monitoring well MW-8, and at Staff Gage 2, located to the southeast of monitoring well MW-11 (Figure 6). As depicted in the groundwater contour map in Figure 6, the direction of groundwater flow is toward the west–southwest with localized flow towards the stormwater ditch along the western side of Pacific Park.

3.2. GROUNDWATER ANALYTICAL RESULTS

A summary of groundwater analytical results for samples collected from monitoring wells is presented in Table 2. Figures 7 and 8 depict the laboratory results for metals and non-metal COPCs in groundwater, respectively. The groundwater analytical data for the June 2019 sampling did not identify concentrations of TPH, cPAHs, or VOCs above the SSLs. Of the five MTCA metals, only dissolved arsenic was detected above the SSL of 3.3 micrograms per liter (µg/L) in wells MW-2, MW-4, MW-11, and MW-12 at concentrations of 7.1 µg/L, 11 µg/L, 3.6 µg/L, and 14.0 µg/L, respectively (Table 2). These results are generally consistent with the results of previous groundwater sampling events at the Site, with the exception of MW-11, where dissolved arsenic was not previously detected.

3.3. SURFACE WATER ANALYTICAL RESULTS

A summary of surface water analytical results for samples from the onsite stormwater pond and ditch is presented in Table 3. Surface water analytical results were compared to the groundwater SSLs protective of surface water. Concentrations of dissolved MTCA metals, cPAHs, and VOCs were not detected in surface water above the SSLs in any of the samples. The concentration of lube oil-range petroleum hydrocarbons detected in sample SW-4 (590 µg/L) slightly exceeded the SSL of 500 µg/L. The follow-up analysis for PCBs in these two samples with detected lube oil-range petroleum hydrocarbons did not identify detectable concentrations of PCBs (see Appendix A).

3.4. Soil Vapor Monitoring Results

A summary of soil vapor monitoring results is presented in Table 4 and field data sheets are provided in Appendix B. No methane (CH_4) or hydrogen sulfide (H_2S) was measured in soil gas at wells MW-6, MW-9, MW-11, or MW-12.

3.5. Data Quality Analysis

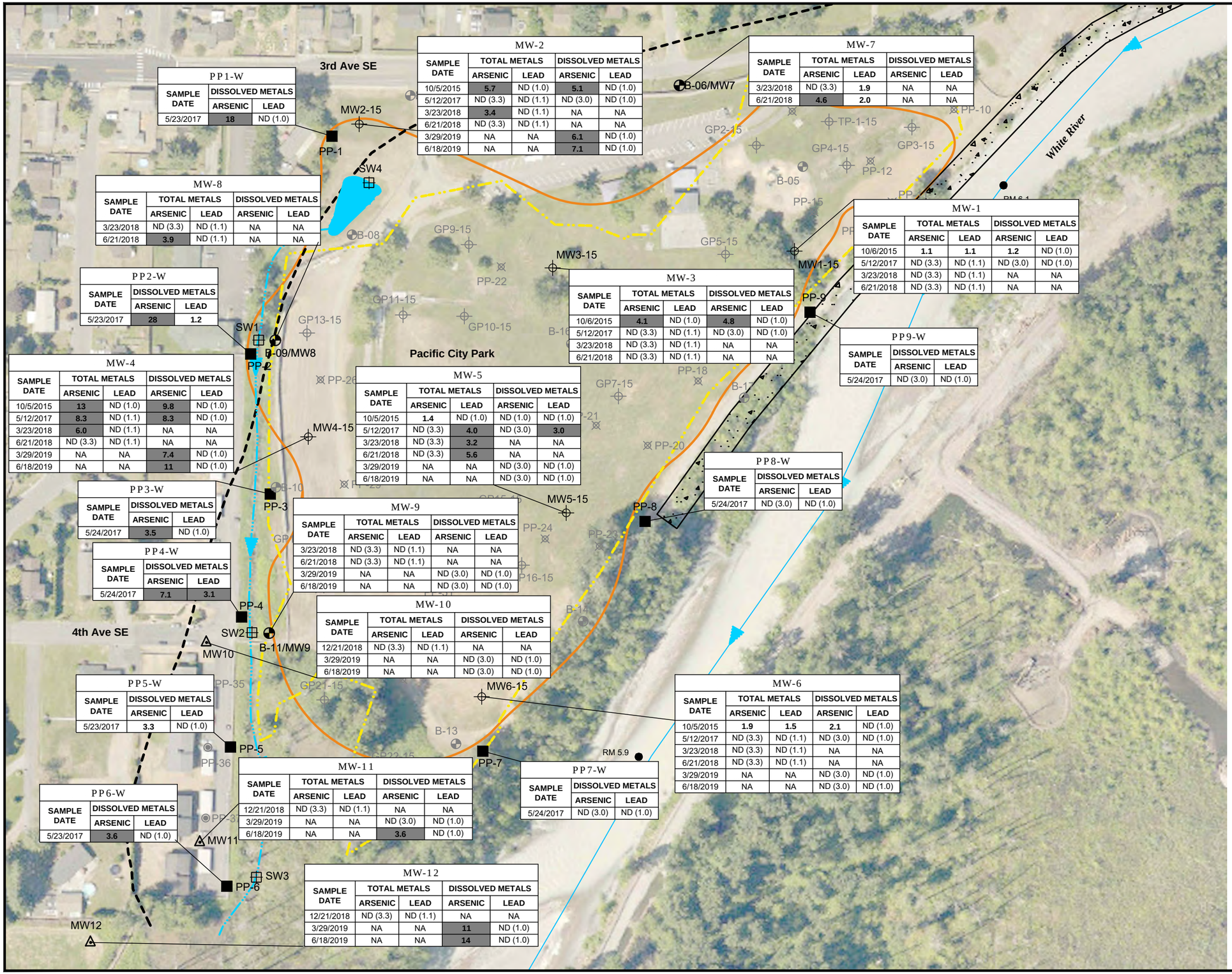
Laboratory analyses for the June and July 2019 investigation were performed by OnSite, of Redmond, Washington, an Ecology-accredited laboratory. Laboratory reports, chain-of-custody forms, and data quality assurance review completed by Herrera are included in Appendix A.

A data quality assurance review was performed for all laboratory data. The data quality for all parameters was considered to be acceptable as reported by the laboratory based on the following criteria:

- Holding time
- Reporting limits
- Method blanks
- Trip blanks
- Laboratory control standard recovery
- Surrogate recovery
- Matrix spike recovery

Laboratory duplicate relative percent difference

Figure 7.
Extent of Total and Dissolved Metals in Groundwater, Pacific City Park, Pacific, Washington.



PP1-W		
SAMPLE DATE	DISSOLVED METALS	
	ARSENIC	LEAD
5/23/2017	18	ND (1.0)

MW-2				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
10/5/2015	5.7	ND (1.0)	5.1	ND (1.0)
5/12/2017	ND (3.3)	ND (1.1)	ND (3.0)	ND (1.0)
3/23/2018	3.4	ND (1.1)	NA	NA
6/21/2018	ND (3.3)	ND (1.1)	NA	NA
3/29/2019	NA	NA	6.1	ND (1.0)
6/18/2019	NA	NA	7.1	ND (1.0)

MW-7				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
3/23/2018	ND (3.3)	1.9	NA	NA
6/21/2018	4.6	2.0	NA	NA

MW-8				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
3/23/2018	ND (3.3)	ND (1.1)	NA	NA
6/21/2018	3.9	ND (1.1)	NA	NA

MW-1				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
10/6/2015	1.1	1.1	1.2	ND (1.0)
5/12/2017	ND (3.3)	ND (1.1)	ND (3.0)	ND (1.0)
3/23/2018	ND (3.3)	ND (1.1)	NA	NA
6/21/2018	ND (3.3)	ND (1.1)	NA	NA

PP2-W		
SAMPLE DATE	DISSOLVED METALS	
	ARSENIC	LEAD
5/23/2017	28	1.2

MW-3				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
10/6/2015	4.1	ND (1.0)	4.8	ND (1.0)
5/12/2017	ND (3.3)	ND (1.1)	ND (3.0)	ND (1.0)
3/23/2018	ND (3.3)	ND (1.1)	NA	NA
6/21/2018	ND (3.3)	ND (1.1)	NA	NA

PP9-W		
SAMPLE DATE	DISSOLVED METALS	
	ARSENIC	LEAD
5/24/2017	ND (3.0)	ND (1.0)

MW-4				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
10/5/2015	13	ND (1.0)	9.8	ND (1.0)
5/12/2017	8.3	ND (1.1)	8.3	ND (1.0)
3/23/2018	6.0	ND (1.1)	NA	NA
6/21/2018	ND (3.3)	ND (1.1)	NA	NA
3/29/2019	NA	NA	7.4	ND (1.0)
6/18/2019	NA	NA	11	ND (1.0)

MW-5				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
10/5/2015	1.4	ND (1.0)	ND (1.0)	ND (1.0)
5/12/2017	ND (3.3)	4.0	ND (3.0)	3.0
3/23/2018	ND (3.3)	3.2	NA	NA
6/21/2018	ND (3.3)	5.6	NA	NA
3/29/2019	NA	NA	ND (3.0)	ND (1.0)
6/18/2019	NA	NA	ND (3.0)	ND (1.0)

PP8-W		
SAMPLE DATE	DISSOLVED METALS	
	ARSENIC	LEAD
5/24/2017	ND (3.0)	ND (1.0)

PP3-W		
SAMPLE DATE	DISSOLVED METALS	
	ARSENIC	LEAD
5/24/2017	3.5	ND (1.0)

MW-9				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
3/23/2018	ND (3.3)	ND (1.1)	NA	NA
6/21/2018	ND (3.3)	ND (1.1)	NA	NA
3/29/2019	NA	NA	ND (3.0)	ND (1.0)
6/18/2019	NA	NA	ND (3.0)	ND (1.0)

PP4-W		
SAMPLE DATE	DISSOLVED METALS	
	ARSENIC	LEAD
5/24/2017	7.1	3.1

MW-10				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
12/21/2018	ND (3.3)	ND (1.1)	NA	NA
3/29/2019	NA	NA	ND (3.0)	ND (1.0)
6/18/2019	NA	NA	ND (3.0)	ND (1.0)

PP5-W		
SAMPLE DATE	DISSOLVED METALS	
	ARSENIC	LEAD
5/23/2017	3.3	ND (1.0)

MW-6				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
10/5/2015	1.9	1.5	2.1	ND (1.0)
5/12/2017	ND (3.3)	ND (1.1)	ND (3.0)	ND (1.0)
3/23/2018	ND (3.3)	ND (1.1)	NA	NA
6/21/2018	ND (3.3)	ND (1.1)	NA	NA
3/29/2019	NA	NA	ND (3.0)	ND (1.0)
6/18/2019	NA	NA	ND (3.0)	ND (1.0)

MW-11				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
12/21/2018	ND (3.3)	ND (1.1)	NA	NA
3/29/2019	NA	NA	ND (3.0)	ND (1.0)
6/18/2019	NA	NA	3.6	ND (1.0)

PP7-W		
SAMPLE DATE	DISSOLVED METALS	
	ARSENIC	LEAD
5/24/2017	ND (3.0)	ND (1.0)

PP6-W		
SAMPLE DATE	DISSOLVED METALS	
	ARSENIC	LEAD
5/23/2017	3.6	ND (1.0)

MW-12				
SAMPLE DATE	TOTAL METALS		DISSOLVED METALS	
	ARSENIC	LEAD	ARSENIC	LEAD
12/21/2018	ND (3.3)	ND (1.1)	NA	NA
3/29/2019	NA	NA	11	ND (1.0)
6/18/2019	NA	NA	14	ND (1.0)

Legend

- Historical edge of river channel based on 1936 aerial photograph (source: King County)
- Pacific City Park MTCA site boundary
- Approximate lateral extent of fill at Pacific City Park
- Existing concrete revetment
- Existing stormwater pond
- Existing stormwater ditch
- Probe location (Herrera, 5-2017)
- Surface water sample location (Herrera, 12-2018)
- Probe/well/test pit location (Shannon & Wilson, 9-2015)
- Geotech boring location (Aspect 2-2018, 3-2018)
- Probe location (Herrera 2-2018, 3-2018)
- Probe location (Herrera 12-2018)
- Monitoring well location (12-2018)
- RM 6.0 River mile (10th)
- 1.1 Sample detected above the reporting limit
- 1.1 Sample exceeds site screening level

Notes

1. Total and dissolved metals values reported in micrograms per liter (µg/L)
2. ND - not detected above the laboratory reporting limit shown in parenthesis
3. NA - not analyzed

0 75 150 300 Feet

King County

N

Aerial source: King County (2017)

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Figure 8
Non-Metals Contaminants of Concern in Groundwater, Pacific City Park, Pacific, Washington.

Legend

- Historical edge of river channel based on 1936 aerial photograph (source: King County)
- Pacific City Park MTCA site boundary
- Approximate lateral extent of fill at Pacific City Park
- Existing concrete revetment
- Existing stormwater pond
- Existing stormwater ditch
- Probe location (Herrera, 5-2017)
- Surface water sample location (Herrera, 12-2018)
- Probe/well/test pit location (Shannon & Wilson, 9-2015)
- Geotech boring location (Aspect 2-2018, 3-2018)
- Probe location (Herrera 2-2018, 3-2018)
- Probe location (Herrera 12-2018)
- Monitoring well location (12-2018)
- RM 6.0 River mile (10th)
- 1.1 Sample exceeds site screening level

Notes

1. Total and dissolved metals values reported in micrograms per liter (µg/L)
2. ND - not detected above the laboratory reporting limit shown in parenthesis
3. NA - not analyzed

0 75 150 300 Feet

N

King County

Aerial source: King County (2017)

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4. CONCLUSIONS

This monitoring report presents groundwater, surface water, and soil vapor monitoring data that supplements information previously presented in the RI report (Herrera 2019a) and Supplemental RI report (Herrera 2019b) prepared for the Site.

The results of the June 2019 groundwater monitoring and sampling event are generally consistent with the results of previous sampling events completed at the Site. The June 2019 groundwater analytical data did not identify concentrations of TPH, cPAHs, or VOCs above the SSLs in the wells. Of the five MTCA metals, only dissolved arsenic was detected in groundwater samples collected from three wells at concentrations slightly above the SSL and the state background level of 5 µg/l. This data reinforces the conclusions from the RI and SRI that leaching of contaminants from the dumpsite is not affecting groundwater quality at concentrations that pose a risk to human health or the environment.

The July 2019 surface water data, consistent with the previous four quarters of sampling, did not identify concentrations of dissolved MTCA metals, cPAHs, or VOCs above the SSLs in any of the samples collected. The concentration of lube oil-range petroleum hydrocarbons detected in one sample from the stormwater pond slightly exceeded the SSL of 500 µg/L. This is likely attributed to runoff associated with vehicle traffic on Third Avenue Southeast or vehicles using the parking lot at the Site. Based on this data, it does not appear that contamination present in soils and groundwater at the Site is impacting surface water.

No methane or hydrogen sulfide were measured in soil gas at wells MW-6, MW-9, MW-11, or MW-12 during the June 2019 monitoring. Based on these results and previous monitoring conducted and discussed in the RI report, and the SRI report, it does not appear that the Site is producing or releasing landfill gas.

The monitoring wells installed as part of the Supplemental RI (MW-10, MW-11 and MW-12) will be sampled quarterly for at least one more quarter in September 2019, along with the five closest upgradient wells (MW-2, MW-4, MW-5, MW-6, and MW-9) sampled in June 2019 for comparison. The data collected will be evaluated to determine seasonal fluctuations in groundwater levels, flow direction, and contaminant presence and concentrations to support selection and implementation of the final cleanup remedy.

5. REFERENCES

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Herrera. 2019a. Remedial Investigation Report, Pacific City Park, Pacific, Washington. Prepared for the River and Floodplain Management Section, King County Water and Land Resources Division by Herrera Environmental Consultants, Inc., Seattle, Washington. January 4.

Herrera. 2019b. Supplemental Remedial Investigation Report, Pacific City Park, Pacific, Washington. Prepared for the River and Floodplain Management Section, King County Water and Land Resources Division by Herrera Environmental Consultants, Inc., Seattle, Washington. May 9.

Herrera. 2019c. March 2019 Monitoring Report, Pacific City Park, Pacific, Washington. Prepared for the River and Floodplain Management Section, King County Water and Land Resources Division by Herrera Environmental Consultants, Inc., Seattle, Washington. June 10.

TABLES

Table 1. Summary of Water Level Elevation Data from Monitoring Wells, Pacific City Park Remedial Investigation, Pacific, Washington.				
Monitoring Well Identification	**Measurement Date**	**Reference Elevation (feet)[a]**	**Depth to Water (feet)**	**Water Level Elevation (feet)**
MW-1	5/12/17	83.16	2.33	80.83
	3/23/18		2.84	80.32
	6/21/18		3.12	80.04
	9/26/18		5.80	77.36
	12/21/18		2.73	80.43
	3/29/19		3.20	79.96
	6/18/19		3.20[b]	79.96
MW-2	5/12/17	79.85	1.37	78.48
	3/23/18		1.81	78.04
	6/21/18		2.32	77.53
	9/26/18		3.68	76.17
	12/21/18		2.07	77.78
	3/29/19		2.07[b]	77.78
	6/18/19		2.52	77.33
MW-3	5/12/17	80.01	0.40	79.61
	3/23/18		0.55	79.46
	6/21/18		1.27	78.74
	9/26/18		3.01	77.00
	12/21/18		0.68	79.33
	3/29/19		1.10	78.91
	6/18/19		1.13	78.88
MW-4	5/12/17	80.14	2.73	77.41
	3/23/18		3.09	77.05
	6/21/18		3.53	76.61
	9/26/18		4.54	75.60
	12/21/18		3.16	76.98
	3/29/19		3.40	76.74
	6/18/19		3.40[b]	76.74
MW-5	5/12/17	81.40	1.60	79.80
	3/23/18		2.26	79.14
	6/21/18		2.38	79.02
	9/26/18		4.80	76.60
	12/21/18		2.04	79.36
	3/29/19		2.42	78.98
	6/18/19		2.42[b]	78.98

Table 1 (continued). Summary of Water Level Elevation Data from Monitoring Wells, Pacific City Park Remedial Investigation, Pacific, Washington.

Monitoring Well Identification	Measurement Date	Reference Elevation (feet)[a]	Depth to Water (feet)	Water Level Elevation (feet)
MW-6	5/12/17	83.81	5.71	78.10
	3/23/18		6.65	77.16
	6/21/18		6.60	77.21
	9/26/18		8.53	75.28
	12/21/18		6.42	77.39
	3/29/19		6.76	77.05
	6/18/19		6.64	77.17
MW-7[c]	3/23/18	79.82	0.32	79.50
	6/21/18		0.78	79.04
	9/26/18		2.68	77.14
	12/21/18		0.84	78.98
	3/29/19		0.69	79.13
	6/18/19		1.02	78.80
MW-8[c]	3/23/18	79.95	2.63	77.32
	6/21/18		3.12	76.83
	9/26/18		4.20	75.75
	12/21/18		3.05	76.90
	3/29/19		3.27	76.68
	6/18/19		3.24	76.71
Staff Gage 1[d]	9/26/18	75.29	0.46	75.75
	10/9/19		0.62	75.91
	12/20/19		1.47	76.76
	12/21/19		1.44	76.73
	3/29/19		1.18	76.47
	6/18/19		1.27	76.56
MW-9[c]	3/23/18	82.59	5.85	76.74
	6/21/18		6.02	76.57
	9/26/18		6.98	75.61
	12/21/18		6.20	76.39
	3/29/19		6.40	76.19
	6/18/19		6.35	76.24
MW-10	12/21/18	79.14	2.71	76.43
	3/29/19		2.87	76.27
	6/18/19		2.87[b]	76.27
MW-11	12/21/18	79.52	4.05	75.47
	3/29/19		4.35	75.17
	6/18/19		4.34	75.18
Staff Gage 2[d]	3/29/19	73.40	1.20	74.60
	6/18/19		1.19	74.59

Table 1 (continued). Summary of Water Level Elevation Data from Monitoring Wells, Pacific City Park Remedial Investigation, Pacific, Washington.

Monitoring Well Identification	Measurement Date	Reference Elevation (feet)[a]	Depth to Water (feet)	Water Level Elevation (feet)
MW-12	12/21/18	78.11	2.51	75.60
	3/29/19		3.12	74.99
	6/18/19		4.02	74.09
B-03[e]	3/23/18	86.12	5.52	80.60
	6/21/18		5.41	80.71
	9/26/18		8.3	77.82
	12/21/18		5.05	81.07
	3/29/19		5.51	80.61
	6/18/19		5.47	80.65

[a] Reference elevation is the top of protective casing (North American Vertical Datum 1988 [NAVD 88])

[b] Groundwater elevations in some wells were the same as the previous event. The results were double-checked and confirmed.

[c] MW-7, MW-8, and MW-9 correspond to probe borings B-06, B-09, and B-11, respectively.

[d] Staff Gages 1 and 2 are installed in close proximity to MW-8 and MW-11, respectively.

[e] Standing water level measurement only at boring location B-03. No groundwater sample was collected.

Table 2. Summary of Groundwater Sample Results from Monitoring Wells, Pacific City Park Remedial Investigation, Pacific, Washington.

Sample Location	Sample Date	Analytical Parameter (µg/L)																			
		Petroleum Hydrocarbons			Volatile Organic Compounds								Total Metals					Dissolved Metals				
		GRO	DRO	Lube Oil	Benzene	Toluene	Ethylbenzene	Xylenes	(cis) 1,2-Dichloroethene	1,4-Dichloro benzene	Chloro-benzene	Vinyl chloride	Arsenic	Cadmium	Chromium	Lead	Mercury	Arsenic	Cadmium	Chromium	Lead	Mercury
Site Screening Level (µg/L)		*1,000*	*500*	*500*	*0.44*	*57*	*29*	*1,000*	*16*		*100*	*0.02*	*3.3*	*4.4*	*50*	*2.5*	*0.5*	*3.3*	*4.4*	*50*	*2.5*	*0.5*
MW-1	10/6/15	ND (50)	ND (50)	ND (100)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.20)	ND (1.0)	ND (0.20)	**1.1**	ND (0.20)	ND (0.50)	**1.1**	ND (0.10)	**1.2**	ND (0.20)	ND (0.50)	ND (1.0)	ND (0.10)
	5/12/17	ND (100)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	3/23/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	6/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	9/26/18	ND (100)	ND (270)	ND (430)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	12/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
MW-2	10/5/15	ND (50)	ND (50)	ND (100)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.20)	ND (1.0)	ND (0.20)	**5.7**	ND (0.20)	**2.3**	ND (1.0)	ND (0.10)	**5.1**	ND (0.20)	**1.6**	ND (1.0)	ND (0.10)
	5/12/17	ND (100)	ND (270)	ND (440)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	3/23/18	ND (110)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	**3.4**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	6/21/18	ND (100)	ND (270)	ND (430)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	9/26/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	**4.9**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	12/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	3/29/19	NA	NA	NA	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA	NA	NA	NA	NA	**6.1**	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	6/18/19	NA	NA	NA	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20	ND (0.20)	NA	NA	NA	NA	NA	**7.1**	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
MW-3	10/6/15	ND (50)	ND (50)	ND (100)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.20)	ND (1.0)	ND (0.20)	**4.1**	ND (0.20)	**2.8**	ND (1.0)	ND (0.10)	**4.8**	ND (0.20)	**1.5**	ND (1.0)	ND (0.10)
	5/12/17	ND (100)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	3/23/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	**0.22**	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	6/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	9/26/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	**0.35**	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	12/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	**0.30**	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
MW-4	10/5/15	ND (50)	ND (50)	ND (100)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.20)	**5.7**	ND (0.20)	**13**	ND (0.20)	**2.7**	ND (1.0)	ND (0.10)	**9.8**	ND (0.20)	**1.5**	ND (1.0)	ND (0.10)
	5/12/17	ND (100)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	**1.5**	ND (0.20)	**8.3**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	**8.3**	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	3/23/18	ND (110)	ND (270)	ND (440)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	**1.1**	ND (0.20)	**6.0**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	6/21/18	ND (100)	ND (270)	ND (430)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	9/26/18	ND (100)	ND (250)	ND (410)	**0.22**	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	**4.6**	ND (0.20)	**14**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	12/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	**3.7**	ND (0.20)	**11**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	3/29/19	NA	NA	NA	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	**2.6**	ND (0.20)	NA	NA	NA	NA	NA	**7.4**	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	6/18/19	NA	NA	NA	ND (0.20)	ND (1.0)	ND (0.20	ND (0.40	ND (0.20)	ND (0.20)	**0.33**	ND (0.20)	NA	NA	NA	NA	NA	**11**	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
MW-5	10/5/15	ND (50)	ND (50)	ND (100)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.20)	ND (1.0)	ND (0.20)	**1.4**	ND (0.20)	**0.52**	ND (1.0)	ND (0.10)	ND (1.0)	ND (0.20)	ND (0.5)	ND (1.0)	ND (0.10)
	5/12/17	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	**4.0**	ND (0.50)	ND (3.0)	ND (4.0)	ND (10)	**3.0**	ND (0.50)
	3/23/18	ND (100)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	**3.2**	ND (0.50)	NA	NA	NA	NA	NA
	6/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	**5.6**	ND (0.50)	NA	NA	NA	NA	NA
	9/26/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	**1.9**	ND (0.50)	NA	NA	NA	NA	NA
	12/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	**1.5**	ND (0.50)	NA	NA	NA	NA	NA
	3/29/19	NA	NA	NA	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA	NA	NA	NA	NA	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	6/18/19	NA	NA	NA	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20	NA	NA	NA	NA	NA	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)

Table 2 (continued). Summary of Groundwater Sample Results from Monitoring Wells, Pacific City Park Remedial Investigation, Pacific, Washington.

Sample Location	Sample Date	Analytical Parameter (µg/L)																				
		Petroleum Hydrocarbons			Volatile Organic Compounds								Total Metals					Dissolved Metals				
		GRO	DRO	Lube Oil	Benzene	Toluene	Ethylbenzene	Xylenes	(cis) 1,2-Dichloroethene	1,4-Dichloro benzene	Chloro-benzene	Vinyl chloride	Arsenic	Cadmium	Chromium	Lead	Mercury	Arsenic	Cadmium	Chromium	Lead	Mercury
Site Screening Level (µg/L)		*1,000*	*500*	*500*	*0.44*	*57*	*29*	*1,000*	*16*	*NA*	*100*	*0.02*	*3.3*	*4.4*	*50*	*2.5*	*0.5*	*3.3*	*4.4*	*50*	*2.5*	*0.5*
MW-6	10/5/15	ND (50)	ND (50)	ND (100)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.20)	ND (1.0)	ND (0.20)	**1.9**	ND (0.20)	**0.74**	**1.5**	ND (0.10)	**2.1**	ND (0.20)	ND (0.50)	ND (1.0)	ND (0.10)
	5/12/17	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	3/23/18	ND (110)	ND (280)	ND (450)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	6/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	9/26/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	**0.20**	ND (0.20)	ND (0.20)	**4.5**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	12/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	3/29/19	NA	NA	NA	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA	NA	NA	NA	NA	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	6/18/19	NA	NA	NA	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA	NA	NA	NA	NA	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
MW-7	3/23/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	**1.9**	ND (0.50)	NA	NA	NA	NA	NA
	6/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	**4.6**	ND (4.4)	ND (11)	**2.0**	ND (0.50)	NA	NA	NA	NA	NA
	9/26/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	**5.5**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	12/21/18	ND (100)	ND (270)	ND (440)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	**4.5**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
MW-8	3/23/18	ND (100)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (1.1)	NA	NA	NA	NA	NA
	6/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	**3.9**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	9/26/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	12/21/18	ND (100)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
MW-9	3/23/18	ND (100)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	6/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	9/26/18	ND (100)	ND (250)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	**0.38**	ND (0.20)	**3.6**	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	12/21/18	ND (100)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	**0.43**	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	3/29/19	NA	NA	NA	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	**0.41**	ND (0.20)	NA	NA	NA	NA	NA	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	6/18/19	NA	NA	NA	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40	ND (0.20)	ND (0.20)	**0.34**	ND (0.20)	NA	NA	NA	NA	NA	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
MW-10	12/21/18	ND (100)	ND (270)	ND (430)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	**0.26**	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	3/29/19	ND (100)	ND (250)	ND (400)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA	NA	NA	NA	NA	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	6/18/19	ND (100)	ND (270)	ND (430)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20	ND (0.20)	ND (0.20)	NA	NA	NA	NA	NA	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
MW-11	12/21/18	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	3/29/19	ND (100)	ND (290)	ND (470)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	**0.24**	ND (0.20)	NA	NA	NA	NA	NA	ND (3.0)	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	6/18/19	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	**0.33**	ND (0.20)	NA	NA	NA	NA	NA	**3.6**	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
MW-12	12/21/18	ND (100)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (3.3)	ND (4.4)	ND (11)	ND (1.1)	ND (0.50)	NA	NA	NA	NA	NA
	3/29/19	ND (100)	ND (260)	ND (420)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA	NA	NA	NA	NA	**11**	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)
	6/18/19	ND (100)	ND (260)	ND (410)	ND (0.20)	ND (1.0)	ND (0.20)	ND (0.40)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	NA	NA	NA	NA	NA	**14**	ND (4.0)	ND (10)	ND (1.0)	ND (0.50)

Table 2 (continued). Summary of Groundwater Sample Results, Pacific City Park Remedial Investigation, Pacific, Washington.

Sample Location	Sample Date	Field Parameters					Analytical Parameter (µg/L)								
								Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)							
		Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (std units)	Turbidity (NTU)	Total PCBs	Benzo(a) anthracene	Chrysene	Benzo(b) fluoranthene	Benzo(j,k) fluoranthene	Benzo(a) pyrene	Indeno(1,2,3-cd) pyrene	Dibenz(a,h) anthracene	Total cPAHs (TEQ)
Site Screening Level (µg/L)		*NA*	*NA*	*NA*	*NA*	*NA*	*0.05*	*0.01*	*0.016*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.015*
MW-1	10/6/15	NR	NR	NR	NR	NR	NA	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.076)
	5/12/17	9.0	3.28	98	6.84	Clear	NA	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0072)
	3/23/18	6.9	4.67	97	6.94	Clear	NA	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0071)
	6/21/18	11.3	1.69	77	6.79	Clear	NA	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0072)
	9/26/18	14.2	2.76	113	6.64	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	12/21/18	7.9	4.35	93	4.45	1.0	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
MW-2	10/5/15	NR	NR	NR	NR	NR	NA	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.0072)
	5/12/17	11.9	2.47	296	6.58	Clear	NA	ND (0.0099)	ND (0.0099)	ND (0.0099)	ND (0.0099)	ND (0.0099)	ND (0.0099)	ND (0.0099)	ND (0.0075)
	3/23/18	9.8	0.66	328	6.54	Clear	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
	6/21/18	13.7	3.28	270	6.33	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	9/26/18	15.8	0.23	276	6.30	Clear	NA	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0071)
	12/21/18	11.5	0.38	314	4.38	30.4	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	3/29/19	10.1	0.21	269	6.40	1.8	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
	6/18/19	13.1	0.20	367	6.30	42.3	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
MW-3	10/6/15	NR	NR	NR	NR	NR	NA	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.0072)
	5/12/17	10.9	0.69	332	7.08	Clear	NA	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0072)
	3/23/18	8.1	0.50	332	7.01	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	6/21/18	12.8	0.11	281	7.08	Clear	NA	ND (0.0097)	ND (0.0097)	ND (0.0097)	ND (0.0097)	ND (0.0097)	ND (0.0097)	ND (0.0097)	ND (0.0073)
	9/26/18	14.5	0.12	322	6.65	Clear	NA	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0095)	ND (0.0072)
	12/21/18	10.1	0.09	414	4.75	85.6	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
MW-4	10/5/15	NR	NR	NR	NR	NR	NA	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.0072)
	5/12/17	11.5	0.19	348	6.60	Clear	NA	ND (0.0096)	ND (0.0096)	ND (0.0096)	ND (0.0096)	ND (0.0096)	ND (0.0096)	ND (0.0096)	ND (0.0072)
	3/23/18	9.1	0.55	307	6.15	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	6/21/18	15.4	2.05	309	6.62	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	9/26/18	20.4	1.47	325	6.10	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	12/21/18	11.8	0.21	351	4.55	9.4	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	3/29/19	9.3	0.25	341	6.64	14.4	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
	6/18/19	14.6	0.44	313	6.61	95.5	NA	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.0091)
MW-5	10/5/15	NR	NR	NR	NR	NR	NA	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.0072)
	5/12/17	9.5	1.06	156	7.08	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	3/23/18	6.7	0.47	129	6.69	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	6/21/18	11.6	0.08	126	7.44	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	9/26/18	15.3	0.26	193	6.90	Clear	NA	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0071)
	12/21/18	10.0	0.45	182	5.14	5.4	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	3/29/19	7.1	0.04	143	7.32	1.7	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)

Table 2 (continued). Summary of Groundwater Sample Results, Pacific City Park Remedial Investigation, Pacific, Washington.

Sample Location	Sample Date	Field Parameters					Analytical Parameter (µg/L)								
								Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)							
		Temp (°C)	DO (mg/L)	Cond (µS/cm)	pH (std units)	Turbidity (NTU)	Total PCBs	Benzo(a) anthracene	Chrysene	Benzo(b) fluoranthene	Benzo(j,k) fluoranthene	Benzo(a) pyrene	Indeno(1,2,3-cd) pyrene	Dibenz(a,h) anthracene	Total cPAHs (TEQ)
Site Screening Level (µg/L)		*NA*	*NA*	*NA*	*NA*	*NA*	*0.05*	*0.01*	*0.016*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.015*
	6/18/19	11.6	0.31	125	7.20	1.3	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
MW-6	10/5/15	NR	NR	NR	NR	NR	NA	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.0072)
	5/12/17	10.2	0.25	132	6.25	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	3/23/18	6.9	0.73	161	5.95	Clear	NA	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0071)
	6/21/18	12.4	0.14	154	6.69	Clear	NA	**0.014**	**0.014**	**0.012**	**0.012**	**0.011**	**0.012**	**0.011**	**0.017**
	9/26/18	15.1	0.44	341	6.25	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	12/21/18	11.0	0.17	206	3.90	3.2	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	3/29/19	6.9	0.24	176	6.64	1.4	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
	6/18/19	12.1	0.35	164	6.62	3.5	NA	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.012)	ND (0.0091)
MW-7	3/23/18	6.9	0.52	127	6.94	Clear	NA	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0071)
	6/21/18	16.2	0.12	137	6.59	Clear	NA	ND (0.0096)	ND (0.0096)	ND (0.0096)	ND (0.0096)	ND (0.0096)	ND (0.0096)	ND (0.0096)	ND (0.0072)
	9/26/18	16.2	0.49	151	6.47	Clear	NA	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0071)
	12/21/18	8.8	0.23	188	4.41	9.7	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
MW-8	3/23/18	10.8	0.45	400	6.62	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	6/21/18	13.4	2.44	384	6.24	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	9/26/18	16.4	0.61	325	6.56	Clear	NA	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0094)	ND (0.0071)
	12/21/18	11.8	0.72	340	6.66	59.0	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
MW-9	3/23/18	10.5	0.42	294	6.22	Clear	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
	6/21/18	11.5	2.65	240	6.58	Clear	NA	ND (0.0098)	ND (0.0098)	ND (0.0098)	ND (0.0098)	ND (0.0098)	ND (0.0098)	ND (0.0098)	ND (0.0074)
	9/26/18	14.5	0.60	249	6.41	Clear	NA	ND (0.0098)	ND (0.0098)	ND (0.0098)	ND (0.0098)	ND (0.0098)	ND (0.0098)	ND (0.0098)	ND (0.0074)
	12/21/18	12.3	0.33	323	6.74	23.0	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
	3/29/19	10.9	0.27	292	6.74	38.0	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
	6/18/19	11.3	0.31	248	6.75	26.2	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
MW-10	12/21/18	12.9	0.29	291	6.83	24	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	3/29/19	11.8	0.21	287	6.72	20.5	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
	6/18/19	14.5	0.91	287	NR	54	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
MW-11	12/21/18	11.6	2.01	409	6.81	8.5	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	3/29/19	10.3	1.05	355	6.39	51	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
	6/18/19	12.4	0.38	307	7.08	37	NA	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.011)	ND (0.0083)
MW-12	12/21/18	8.3	2.26	265	6.34	9	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	3/29/19	8.3	0.92	240	6.06	50	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)
	6/18/19	10.7	0.64	322	6.67	Clear	NA	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.0076)

Note: MW7, MW8, and MW9 correspond to borings B06, B09, and B11

BOLD values detected above the reporting limit. **Shaded values** exceed site criteria. cPAHs (TEQ) = Carcinogenic polycyclic aromatic hydrocarbons toxic equivalency DRO = Diesel range organics PCBs = Polychlorinated biphenyls

GRO = Gasoline range organics µg/L = micrograms per liter NA = not analyzed or not applicable NR = not reported

ND = not detected above laboratory reporting limits shown in parentheses

Table 3. Summary of Surface Water Sample Results, Pacific City Park Remedial Investigation, Pacific, Washington.

	Sample Identification																			
	SW1					SW2					SW3					SW4				SSL[a]
Parameter	6/29/18	10/9/18	12/20/18	3/26/19	7/10/19	6/29/18	10/9/18	12/20/18	3/26/19	7/10/19	6/29/18	10/9/18	12/20/18	3/26/19	7/10/19	10/9/18	12/20/18	3/26/19	7/10/19	
Field Parameters																				
Temp (°C)	14.2	1.2	9.7	10.8	16.4	14.7	12.3	10.5	11.1	16.8	14.3	12.9	10.5	10.5	18.2	12.9	11.5	10.6	15.7	NA
DO (mg/L)	1.62		1.24	3.45	0.60	1.84	0.36	1.28	3.71	0.98	1.12	0.8	0.59	4.42	1.75	0.65	2.53	2.55	1.36	NA
Cond (µS/cm)	153.7	204	209	193	278	170	208	182	194	161	178	151	180	197	167	179	182	192	158	NA
pH (std units)	6.73	6.84	7.07	6.80	6.56	6.84	6.74	6.88	6.86	6.64	6.94	6.65	6.94	6.83	6.80	6.69	7.10	6.80	6.57	NA
Turbidity (NTU)	13.72	Clear	12.5	<25	Clear	10.76	Clear	25	12.5	Clear	12.33	Clear	11.5	11.1	Clear	Clear	11.2	6.5	Clear	NA
Conventional Parameters (mg/L)																				
Hardness (mg CaCO3/L)	**66**	**62**	**85**	NA	**59**	**71**	**51**	**77**	NA	**59**	**74**	**51**	**69**	NA	**61**	**45**	**69**	NA	55	NA
Petroleum Hydrocarbons (µg/L)																				
GRO	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	
DRO	ND (250)	ND (250)	ND (260)	ND (270)	ND (280	ND (260)	ND (260)	ND (270)	ND (290)	ND (290)	ND (260)	ND (260)	ND (250)	ND (250)	ND (310)	ND (250)	*ND (260)*	ND (260)	ND (290)	*500*
Lube Oil RO	ND (410)	ND (410)	ND (410)	ND (430)	**490**	ND (420)	ND (420)	ND (420)	ND (460)	ND (470)	ND (420)	ND (410)	ND (400)	ND (400)	ND (500)	ND (400)	*ND (410)*	ND (420)	**590**	*500*
Volatile Organic Compounds (µg/L)																				
Benzene	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	*0.44*
Toluene	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	**1.1**	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	*57*
Ethylbenzene	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	*29*
Xylenes	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	*1000*
Acetone	ND (5.0)	ND (5.0)	ND (7.0)	ND (6.3)	ND (6.5)	ND (5.0)	ND (5.0)	ND (7.0)	ND (6.3)	ND (6.5)	ND (5.0)	ND (5.0)	ND (7.0)	ND (6.3)	ND (6.5)	ND (5.0)	ND (7.0)	ND (6.3)	ND (6.5)	*7,200*
(cis)1,2-Dichloroethene	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	*16*
Chlorobenzene	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	*100*
Vinyl Chloride	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	*0.02*

Table 3 (continued). Summary of Surface Water Sample Results, Pacific City Park Remedial Investigation, Pacific, Washington.

Parameter	Sample Identification																			
	SW1					SW2					SW3					SW4				SSLa
	6/29/18	10/9/18	12/20/18	3/26/19	7/10/19	6/29/18	10/9/18	12/20/18	3/26/19	7/10/19	6/29/18	10/9/18	12/20/18	3/26/19	7/10/19	10/9/18	12/20/18	3/26/19	7/10/19	
Total Metals (µg/L)																				
Arsenic	ND (3.3)	ND (3.3)	ND (3.3)	NA	NA	ND (3.3)	ND (3.3)	ND (3.3)	NA	NA	ND (3.3)	ND (3.3)	ND (3.3)	NA	NA	ND (3.3)	ND (3.3)	NA	NA	*3.3*
Cadmium	ND (4.4)	ND (4.4)	ND (4.4)	NA	NA	ND (4.4)	ND (4.4)	ND (4.4)	NA	NA	ND (4.4)	ND (4.4)	ND (4.4)	NA	NA	ND (4.4)	ND (4.4)	NA	NA	*4.4*
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	*NA*
Chromium	ND (11)	ND (11)	ND (11)	NA	NA	ND (11)	ND (11)	ND (11)	NA	NA	ND (11)	ND (11)	ND (11)	NA	NA	ND (11)	ND (11)	NA	NA	*74*
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	*1,300*
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	*1,000*
Lead	ND (1.1)	ND (1.1)	ND (1.1)	NA	NA	ND (1.1)	ND (1.1)	ND (1.1)	NA	NA	ND (1.1)	ND (1.1)	ND (1.1)	NA	NA	ND (1.1)	ND (1.1)	NA	NA	*2.5*
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	*NA*
Mercury	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	ND (0.50)	ND (0.50)	ND (0.50)	NA	NA	ND (0.50)	ND (0.50)	NA	NA	*0.50*
Dissolved Metals (µg/L)																				
Arsenic	NA	NA	NA	ND (3.0)	ND (3.0)	NA	NA	NA	ND (3.0)	ND (3.0)	NA	NA	NA	ND (3.0)	ND (3.0)	NA	NA	ND (3.0)	ND (3.0)	*3.3*
Cadmium	NA	NA	NA	ND (4.0)	ND (4.0)	NA	NA	NA	ND (4.0)	ND (4.0)	NA	NA	NA	ND (4.0)	ND (4.0)	NA	NA	ND (4.0)	ND (4.0)	*74*
Chromium	NA	NA	NA	ND (10)	ND (10)	NA	NA	NA	ND (10)	ND (10)	NA	NA	NA	ND (10)	ND (10)	NA	NA	ND (10)	ND (10)	*1,300*
Lead	NA	NA	NA	ND (1.0)	ND (1.0)	NA	NA	NA	ND (1.0)	ND (1.0)	NA	NA	NA	ND (1.0)	ND (1.0)	NA	NA	ND (1.0)	ND (1.0)	*2.5*
Mercury	NA	NA	NA	ND (0.5)	ND (0.5)	NA	NA	NA	ND (0.5)	ND (0.5)	NA	NA	NA	ND (0.5)	ND (0.5)	NA	NA	ND (0.5)	ND (0.5)	*50*
Carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)																				
Benzo(a) anthracene	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.011)	*0.01*
Benzo(b) fluoranthene	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.011)	*0.01*
Benzo(j,k) fluoranthene	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.011)	*0.01*
Benzo(a) pyrene	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.011)	*0.01*
Chrysene	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.011)	*0.016*
Indeno(1,2,3-cd)pyrene	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.011)	*0.01*
Dibenz(a,h) anthracene	ND (0.011)	ND (0.011)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.010)	ND (0.011)	ND (0.010)	ND (0.011)	*0.01*
Total cPAHs TEQ[b]	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	ND (0.008)	*0.085*

Bold values detected above the reporting limit

Shaded values exceed the site screening level

[a] Refer to Table 7, "Proposed Site Screening Levels for Groundwater and Surface Water" for notes on how each screening level was selected.

[b] Total carcinogenic polycyclic aromatic hydrocarbon (cPAHs) toxic equivalency (TEQ) concentration was calculated using one-half the reporting limit for compounds that were not detected above the reporting limit.

mg/L = milligrams per liter

µg/L = micrograms per liter

NA = not analyzed

ND = not detected above laboratory reporting limits shown in parentheses

SSL = site screening levels

Table 4. Summary of Soil Vapor Monitoring Data, Pacific City Park Remedial Investigation, Pacific, Washington.				
		Parameter		
Sample Location	Sample Date	Methane (percent volume)	Trace Gas[b] (ppm)	H_2S (ppm)
1	10/23/1984	Trace	0.1	NA
2		0	0.3	NA
3		0	-0.1	NA
4		0	0	NA
5		0.3	6.2	NA
6		0	0	NA
7		0	0	NA
8		0	NA	NA
9		NA	0	NA
10		0	-0.1	NA
a		0.4	0	NA
b		Trace	0	NA
c		0.2	0	NA
d		Trace	0.1	NA
e		Trace	0	NA
MW1	9/26/18	0.0	NA	0.0
MW6	3/23/18	0.0	NA	0.0
	6/21/18	0.0	NA	0.0
	9/26/18	0.0	NA	0.0
	12/21/18	0.0	NA	0.0
	3/29/19	0.0	NA	0.0
	6/18/19	0.0	NA	0.0
MW9	3/23/18	0.0	NA	0.0
	6/21/18	0.0	NA	0.0
	9/26/18	0.0	NA	0.0
	12/21/18	0.0	NA	0.0
	3/29/19	0.0	NA	0.0
	6/18/19	0.0	NA	0.0
MW11	3/23/18	0.0	NA	0.0
	6/21/18	0.0	NA	0.0
	9/26/18	0.0	NA	0.0
	12/21/18	0.0	NA	0.0
	3/29/19	0.0	NA	0.0
	6/18/19	0.0	NA	0.0

[a] Samples 1 through 10, and a through e by King County 1984. Samples MW1, MW6, MW9, and MW11 by Herrera.

[b] Trace gases include any organic or inorganic gases with an ionization potential <10.2 electron volts (eV) detected by photo-ionization detector (PID).

NA = not analyzed H_2S = hydrogen sulfide

ppm = parts per million

APPENDIX A

Laboratory Analytical Data

Herrera Environmental Consultants, Inc.

Internal Memorandum

Date: August 20, 2019

To: Project File 17-06520-000

From: Gina Catarra

Subject: Data Quality Assurance Review of Pacific Park Data

This memorandum presents a review of surface water and groundwater samples collected for the Pacific Park project. A total of four surface water and eight groundwater samples were collected on June 18 and July 10, 2019, from the Pacific Park site in Pacific, Washington. OnSite Environmental, Inc., of Redmond, Washington analyzed the samples for:

- Total petroleum hydrocarbons by Ecology's NWTPH-Gx and NWTPH-Dx methods
- Volatile organic compounds (VOCs) by EPA Method 8260C
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by EPA Method 8270D/SIM
- Polychlorinated biphenyls (PCBs) by EPA Method 8082A
- Dissolved metals (arsenic, cadmium, chromium, and lead) by EPA Method 200.8
- Hardness by EPA Method 200.7/Standard Method 2340B

Results for the following samples were validated.

Table 1. Summary of Samples Collected			
Sample ID	**Date | Time Collected**	**Lab Reference Number**	**Analyses**
MW-2	6/18/19 | 11:15	1906-183	VOCs, cPAHs, metals
MW-4	6/18/19 | 12:40	1906-183	VOCs, cPAHs, metals
MW-5	6/18/19 | 14:35	1906-183	VOCs, cPAHs, metals
MW-6	6/18/19 | 13:35	1906-183	VOCs, cPAHs, metals
MW-9	6/18/19 | 15:39	1906-183	VOCs, cPAHs, metals
MW-10	6/18/19 | 16:00	1906-183	Gx, Dx, VOCs, cPAHs, metals
MW-11	6/18/19 | 13:00	1906-183	Gx, Dx, VOCs, cPAHs, metals
MW-12	6/18/19 | 13:45	1906-183	Gx, Dx, VOCs, cPAHs, metals
SW1	7/10/19 | 12:25	1907-109 1907-109B	Gx, Dx, VOCs, cPAHs, metals, hardness PCBs
SW2	7/10/19 | 11:55	1907-109	Gx, Dx, VOCs, cPAHs, metals, hardness
SW3	7/10/19 | 11:35	1907-109	Gx, Dx, VOCs, cPAHs, metals, hardness
SW4	7/10/19 | 12:50	1907-109 1907-109B	Gx, Dx, VOCs, cPAHs, metals, hardness PCBs

The laboratory's performance was reviewed in accordance with quality control (QC) criteria outlined in the *Pacific Park/Dumpsite Environmental and Economic Assessment Sampling and Analysis Plan* (SAP) (Herrera 2017) and the specified analytical methods.

Quality control data summaries submitted by the laboratory were reviewed; raw data were not provided by the laboratory. Data qualifiers (flags) were added to the sample results in the laboratory reports. Data validation results are summarized below followed by definitions of data qualifiers.

Custody, Preservation, Holding Times, and Completeness—Acceptable

The samples were properly preserved, and sample custody was maintained from sample collection to receipt at the laboratories. All samples were analyzed within the required method holding time. The laboratory report was complete and contained results for all samples and tests requested on the chain-of-custody (COC) forms.

Laboratory Reporting Limits—Acceptable

The laboratory reporting limits (RLs) met those established in the SAP.

Method Blank Analysis—Acceptable

Method blanks were analyzed at the required frequency. Method blanks did not contain levels of target analytes above the laboratory reporting limits.

Trip Blank Analysis—Acceptable

Trip blanks were analyzed for VOCs at the required frequency. Trip blanks did not contain levels of target analytes above the laboratory reporting limits.

Laboratory Control Sample Analysis—Acceptable

Blank spike (BS) or blank spike/blank spike duplicate (BS/BSD) samples were analyzed with project samples for VOCs, PAHs, and PCBs at the required frequency. The percent recovery values met the control limits established by the SAP.

Surrogate Analysis—Acceptable

Surrogate compounds were added to all samples as required by the specified methods. The percent recovery values for all surrogate compounds met the criteria established by the laboratory or specified method.

Matrix Spike Analysis – Acceptable

Matrix spike samples were analyzed at the required frequency. All matrix spike percent recovery values met the project-specific criteria (75 to 125 percent) for project samples analyzed as matrix spike samples.

Laboratory Duplicates – Acceptable

Laboratory duplicate samples were analyzed for Gx, Dx, metals; BS/BSD samples were analyzed for VOCs, cPAHs, and PCBs. The relative percent difference (RPD) was calculated for each analyte where both duplicate values were greater than five times the reporting limit (RL). The difference between duplicate values was calculated if the detected compound concentration was less than five times the RL in either the sample or the duplicate. The RPD values or difference values met the control limits established in the QAPP (less than 20 percent).

Definition of Data Qualifiers

The following data qualifier definitions are taken from *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (US EPA 2017):

U The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

J The associated value is an estimated quantity.

UJ The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

R The data are unusable. (Note: analyte may or may not be present.)

References

Herrera. 2017. Pacific Park/Dumpsite Environmental and Economic Assessment, Pacific, Washington, Sampling and Analysis Plan. Prepared by Herrera Environmental Consultants, Inc., Seattle, Washington, for the River and Floodplain Management Section, King County Water and Land Resources Division, King County, Washington. April.

US EPA. 2017. National Functional Guidelines for Inorganic Superfund Data Review. US Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation, Washington, DC. (EPA-540-R-2017-001). January.

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 27, 2019

George Iftner
Herrera Environmental Consultants, Inc.
2200 6th Avenue, Suite 1100
Seattle, WA 98121

Re: Analytical Data for Project 17-06520-000
Laboratory Reference No. 1906-183

Dear George:

Enclosed are the analytical results and associated quality control data for samples submitted on June 19, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

Case Narrative

Samples were collected on June 18, 2019 and received by the laboratory on June 19, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10**					
Laboratory ID:	06-183-06					
Gasoline	**ND**	100	NWTPH-Gx	6-21-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*59-122*				
Client ID:	**MW-11**					
Laboratory ID:	06-183-07					
Gasoline	**ND**	100	NWTPH-Gx	6-21-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*59-122*				
Client ID:	**MW-12**					
Laboratory ID:	06-183-08					
Gasoline	**ND**	100	NWTPH-Gx	6-21-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*59-122*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
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GASOLINE RANGE ORGANICS
NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0621W2					
Gasoline	**ND**	100	NWTPH-Gx	6-21-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*59-122*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	06-180-02										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*89*	*90*	*59-122*			

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10**					
Laboratory ID:	06-183-06					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	6-21-19	6-21-19	
Lube Oil Range Organics	**ND**	0.43	NWTPH-Dx	6-21-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*79*	*50-150*				
Client ID:	**MW-11**					
Laboratory ID:	06-183-07					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	6-21-19	6-21-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	6-21-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				
Client ID:	**MW-12**					
Laboratory ID:	06-183-08					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	6-21-19	6-21-19	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	6-21-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
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Project: 17-06520-000

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0621W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	6-21-19	6-21-19	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	6-21-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	06-178-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*92*	*93*	*50-150*			

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

VOLATILE ORGANICS EPA 8260C
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	06-183-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloromethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Vinyl Chloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromomethane	ND	0.29	EPA 8260C	6-20-19	6-20-19	
Chloroethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Acetone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Iodomethane	ND	2.1	EPA 8260C	6-20-19	6-20-19	
Carbon Disulfide	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methylene Chloride	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Vinyl Acetate	ND	1.0	EPA 8260C	6-20-19	6-20-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Butanone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Bromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloroform	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Benzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Trichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Dibromomethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromodichloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Toluene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	06-183-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Tetrachloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Hexanone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Dibromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Ethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
m,p-Xylene	ND	0.40	EPA 8260C	6-20-19	6-20-19	
o-Xylene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Styrene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromoform	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Isopropylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Propylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Naphthalene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*75-127*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*94*	*78-125*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

VOLATILE ORGANICS EPA 8260C
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	06-183-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloromethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Vinyl Chloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromomethane	ND	0.29	EPA 8260C	6-20-19	6-20-19	
Chloroethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Acetone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Iodomethane	ND	2.1	EPA 8260C	6-20-19	6-20-19	
Carbon Disulfide	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methylene Chloride	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Vinyl Acetate	ND	1.0	EPA 8260C	6-20-19	6-20-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Butanone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Bromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloroform	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Benzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Trichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Dibromomethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromodichloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Toluene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	

Date of Report: June 27, 2019
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Project: 17-06520-000

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	06-183-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Tetrachloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Hexanone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Dibromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chlorobenzene	3.3	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Ethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
m,p-Xylene	ND	0.40	EPA 8260C	6-20-19	6-20-19	
o-Xylene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Styrene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromoform	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Isopropylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Propylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Naphthalene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*104*	*75-127*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*94*	*78-125*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	06-183-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloromethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Vinyl Chloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromomethane	ND	0.29	EPA 8260C	6-20-19	6-20-19	
Chloroethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Acetone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Iodomethane	ND	2.1	EPA 8260C	6-20-19	6-20-19	
Carbon Disulfide	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methylene Chloride	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Vinyl Acetate	ND	1.0	EPA 8260C	6-20-19	6-20-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Butanone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Bromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloroform	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Benzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Trichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Dibromomethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromodichloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Toluene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	06-183-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Tetrachloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Hexanone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Dibromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Ethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
m,p-Xylene	ND	0.40	EPA 8260C	6-20-19	6-20-19	
o-Xylene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Styrene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromoform	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Isopropylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Propylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Naphthalene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*75-127*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*93*	*78-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	06-183-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloromethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Vinyl Chloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromomethane	ND	0.29	EPA 8260C	6-20-19	6-20-19	
Chloroethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Acetone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Iodomethane	ND	2.1	EPA 8260C	6-20-19	6-20-19	
Carbon Disulfide	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methylene Chloride	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Vinyl Acetate	ND	1.0	EPA 8260C	6-20-19	6-20-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Butanone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Bromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloroform	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Benzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Trichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Dibromomethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromodichloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Toluene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	06-183-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Tetrachloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Hexanone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Dibromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Ethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
m,p-Xylene	ND	0.40	EPA 8260C	6-20-19	6-20-19	
o-Xylene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Styrene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromoform	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Isopropylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Propylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Naphthalene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*75-127*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*91*	*78-125*				

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Project: 17-06520-000

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	06-183-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloromethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Vinyl Chloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromomethane	ND	0.29	EPA 8260C	6-20-19	6-20-19	
Chloroethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Acetone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Iodomethane	ND	2.1	EPA 8260C	6-20-19	6-20-19	
Carbon Disulfide	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methylene Chloride	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Vinyl Acetate	ND	1.0	EPA 8260C	6-20-19	6-20-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Butanone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Bromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloroform	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Benzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Trichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Dibromomethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromodichloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Toluene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	

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Project: 17-06520-000

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	06-183-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Tetrachloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Hexanone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Dibromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chlorobenzene	0.34	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Ethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
m,p-Xylene	ND	0.40	EPA 8260C	6-20-19	6-20-19	
o-Xylene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Styrene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromoform	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Isopropylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Propylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Naphthalene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*75-127*				
Toluene-d8	*97*	*80-127*				
4-Bromofluorobenzene	*89*	*78-125*				

Date of Report: June 27, 2019
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Project: 17-06520-000

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10**					
Laboratory ID:	06-183-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloromethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Vinyl Chloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromomethane	ND	0.29	EPA 8260C	6-20-19	6-20-19	
Chloroethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Acetone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Iodomethane	ND	2.1	EPA 8260C	6-20-19	6-20-19	
Carbon Disulfide	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methylene Chloride	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Vinyl Acetate	ND	1.0	EPA 8260C	6-20-19	6-20-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Butanone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Bromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloroform	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Benzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Trichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Dibromomethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromodichloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Toluene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10**					
Laboratory ID:	06-183-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Tetrachloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Hexanone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Dibromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Ethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
m,p-Xylene	ND	0.40	EPA 8260C	6-20-19	6-20-19	
o-Xylene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Styrene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromoform	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Isopropylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Propylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Naphthalene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*75-127*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*91*	*78-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-11**					
Laboratory ID:	06-183-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloromethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Vinyl Chloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromomethane	ND	0.29	EPA 8260C	6-20-19	6-20-19	
Chloroethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Acetone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Iodomethane	ND	2.1	EPA 8260C	6-20-19	6-20-19	
Carbon Disulfide	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methylene Chloride	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Vinyl Acetate	ND	1.0	EPA 8260C	6-20-19	6-20-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Butanone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Bromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloroform	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Benzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Trichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Dibromomethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromodichloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Toluene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-11**					
Laboratory ID:	06-183-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Tetrachloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Hexanone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Dibromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chlorobenzene	0.33	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Ethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
m,p-Xylene	ND	0.40	EPA 8260C	6-20-19	6-20-19	
o-Xylene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Styrene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromoform	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Isopropylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Propylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Naphthalene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*75-127*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*92*	*78-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-12**					
Laboratory ID:	06-183-08					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloromethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Vinyl Chloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromomethane	ND	0.29	EPA 8260C	6-20-19	6-20-19	
Chloroethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Acetone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Iodomethane	ND	2.1	EPA 8260C	6-20-19	6-20-19	
Carbon Disulfide	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methylene Chloride	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Vinyl Acetate	ND	1.0	EPA 8260C	6-20-19	6-20-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Butanone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Bromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloroform	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Benzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Trichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Dibromomethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromodichloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Toluene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-12**					
Laboratory ID:	06-183-08					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Tetrachloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Hexanone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Dibromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Ethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
m,p-Xylene	ND	0.40	EPA 8260C	6-20-19	6-20-19	
o-Xylene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Styrene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromoform	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Isopropylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Propylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Naphthalene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*75-127*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*93*	*78-125*				

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Project: 17-06520-000

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**BLANK**					
Laboratory ID:	06-183-09					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloromethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Vinyl Chloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromomethane	ND	0.29	EPA 8260C	6-20-19	6-20-19	
Chloroethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Acetone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Iodomethane	ND	2.1	EPA 8260C	6-20-19	6-20-19	
Carbon Disulfide	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methylene Chloride	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Vinyl Acetate	ND	1.0	EPA 8260C	6-20-19	6-20-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Butanone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Bromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloroform	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Benzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Trichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Dibromomethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromodichloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Toluene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**BLANK**					
Laboratory ID:	06-183-09					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Tetrachloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Hexanone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Dibromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Ethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
m,p-Xylene	ND	0.40	EPA 8260C	6-20-19	6-20-19	
o-Xylene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Styrene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromoform	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Isopropylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Propylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Naphthalene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*75-127*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*94*	*78-125*				

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Project: 17-06520-000

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0620W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloromethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Vinyl Chloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromomethane	ND	0.29	EPA 8260C	6-20-19	6-20-19	
Chloroethane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Acetone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Iodomethane	ND	2.1	EPA 8260C	6-20-19	6-20-19	
Carbon Disulfide	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methylene Chloride	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Vinyl Acetate	ND	1.0	EPA 8260C	6-20-19	6-20-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Butanone	ND	5.0	EPA 8260C	6-20-19	6-20-19	
Bromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chloroform	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Benzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Trichloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Dibromomethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromodichloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Toluene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	6-20-19	6-20-19	

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METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0620W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Tetrachloroethene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Hexanone	ND	2.0	EPA 8260C	6-20-19	6-20-19	
Dibromochloromethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Chlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Ethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
m,p-Xylene	ND	0.40	EPA 8260C	6-20-19	6-20-19	
o-Xylene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Styrene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromoform	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Isopropylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Bromobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Propylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
n-Butylbenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
Naphthalene	ND	1.0	EPA 8260C	6-20-19	6-20-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*75-127*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*92*	*78-125*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

VOLATILE ORGANICS EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0620W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**9.47**	**8.92**	10.0	10.0	95	89	63-130	6	17	
Benzene	**9.95**	**9.33**	10.0	10.0	100	93	76-125	6	19	
Trichloroethene	**10.3**	**9.74**	10.0	10.0	103	97	76-121	6	18	
Toluene	**9.94**	**9.44**	10.0	10.0	99	94	80-124	5	18	
Chlorobenzene	**10.8**	**10.1**	10.0	10.0	108	101	75-120	7	19	
Surrogate:										
Dibromofluoromethane					*101*	*103*	*75-127*			
Toluene-d8					*98*	*97*	*80-127*			
4-Bromofluorobenzene					*93*	*91*	*78-125*			

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	06-183-01					
Arsenic	**7.1**	3.0	EPA 200.8		6-21-19	
Cadmium	**ND**	4.0	EPA 200.8		6-21-19	
Chromium	**ND**	10	EPA 200.8		6-21-19	
Lead	**ND**	1.0	EPA 200.8		6-21-19	
Mercury	**ND**	0.50	EPA 7470A		6-24-19	
Client ID:	**MW-4**					
Laboratory ID:	06-183-02					
Arsenic	**11**	3.0	EPA 200.8		6-21-19	
Cadmium	**ND**	4.0	EPA 200.8		6-21-19	
Chromium	**ND**	10	EPA 200.8		6-21-19	
Lead	**ND**	1.0	EPA 200.8		6-21-19	
Mercury	**ND**	0.50	EPA 7470A		6-24-19	
Client ID:	**MW-5**					
Laboratory ID:	06-183-03					
Arsenic	**ND**	3.0	EPA 200.8		6-21-19	
Cadmium	**ND**	4.0	EPA 200.8		6-21-19	
Chromium	**ND**	10	EPA 200.8		6-21-19	
Lead	**ND**	1.0	EPA 200.8		6-21-19	
Mercury	**ND**	0.50	EPA 7470A		6-24-19	
Client ID:	**MW-6**					
Laboratory ID:	06-183-04					
Arsenic	**ND**	3.0	EPA 200.8		6-21-19	
Cadmium	**ND**	4.0	EPA 200.8		6-21-19	
Chromium	**ND**	10	EPA 200.8		6-21-19	
Lead	**ND**	1.0	EPA 200.8		6-21-19	
Mercury	**ND**	0.50	EPA 7470A		6-24-19	

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	06-183-05					
Arsenic	**ND**	3.0	EPA 200.8		6-21-19	
Cadmium	**ND**	4.0	EPA 200.8		6-21-19	
Chromium	**ND**	10	EPA 200.8		6-21-19	
Lead	**ND**	1.0	EPA 200.8		6-21-19	
Mercury	**ND**	0.50	EPA 7470A		6-24-19	
Client ID:	**MW-10**					
Laboratory ID:	06-183-06					
Arsenic	**ND**	3.0	EPA 200.8		6-21-19	
Cadmium	**ND**	4.0	EPA 200.8		6-21-19	
Chromium	**ND**	10	EPA 200.8		6-21-19	
Lead	**ND**	1.0	EPA 200.8		6-21-19	
Mercury	**ND**	0.50	EPA 7470A		6-24-19	
Client ID:	**MW-11**					
Laboratory ID:	06-183-07					
Arsenic	**3.6**	3.0	EPA 200.8		6-21-19	
Cadmium	**ND**	4.0	EPA 200.8		6-21-19	
Chromium	**ND**	10	EPA 200.8		6-21-19	
Lead	**ND**	1.0	EPA 200.8		6-21-19	
Mercury	**ND**	0.50	EPA 7470A		6-24-19	
Client ID:	**MW-12**					
Laboratory ID:	06-183-08					
Arsenic	**14**	3.0	EPA 200.8		6-21-19	
Cadmium	**ND**	4.0	EPA 200.8		6-21-19	
Chromium	**ND**	10	EPA 200.8		6-21-19	
Lead	**ND**	1.0	EPA 200.8		6-21-19	
Mercury	**ND**	0.50	EPA 7470A		6-24-19	

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

DISSOLVED METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0618F1					
Arsenic	**ND**	3.0	EPA 200.8	6-18-19	6-21-19	
Cadmium	**ND**	4.0	EPA 200.8	6-18-19	6-21-19	
Chromium	**ND**	10	EPA 200.8	6-18-19	6-21-19	
Lead	**ND**	1.0	EPA 200.8	6-18-19	6-21-19	
Laboratory ID:	MB0618F1					
Mercury	**ND**	0.50	EPA 7470A	6-18-19	6-24-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	06-168-05										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	06-168-05										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	06-168-05										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**86.4**	**94.0**	80.0	80.0	ND	**108**	**118**	75-125	8	20	
Cadmium	**78.4**	**85.6**	80.0	80.0	ND	**98**	**107**	75-125	9	20	
Chromium	**78.8**	**86.4**	80.0	80.0	ND	**99**	**108**	75-125	9	20	
Lead	**73.4**	**80.4**	80.0	80.0	ND	**92**	**101**	75-125	9	20	
Laboratory ID:	06-168-05										
Mercury	**11.1**	**11.4**	12.5	12.5	ND	**88**	**91**	75-125	3	20	

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	06-183-01					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-20-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-20-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-20-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-20-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-20-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-20-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-20-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*65*	*27 - 106*				
Pyrene-d10	*85*	*35 - 98*				
Terphenyl-d14	*94*	*41 - 129*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	06-183-02					
Benzo[a]anthracene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Chrysene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[b]fluoranthene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo(j,k)fluoranthene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[a]pyrene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Dibenz[a,h]anthracene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*56*	*27 - 106*				
Pyrene-d10	*76*	*35 - 98*				
Terphenyl-d14	*85*	*41 - 129*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5**					
Laboratory ID:	06-183-03					
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*85*	*27 - 106*				
Pyrene-d10	*77*	*35 - 98*				
Terphenyl-d14	*109*	*41 - 129*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6**					
Laboratory ID:	06-183-04					
Benzo[a]anthracene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Chrysene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[b]fluoranthene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo(j,k)fluoranthene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[a]pyrene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Dibenz[a,h]anthracene	**ND**	0.012	EPA 8270D/SIM	6-20-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*80*	*27 - 106*				
Pyrene-d10	*88*	*35 - 98*				
Terphenyl-d14	*97*	*41 - 129*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	06-183-05					
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*62*	*27 - 106*				
Pyrene-d10	*63*	*35 - 98*				
Terphenyl-d14	*80*	*41 - 129*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10**					
Laboratory ID:	06-183-06					
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*73*	*27 - 106*				
Pyrene-d10	*76*	*35 - 98*				
Terphenyl-d14	*104*	*41 - 129*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-11**					
Laboratory ID:	06-183-07					
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	6-20-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*66*	*27 - 106*				
Pyrene-d10	*74*	*35 - 98*				
Terphenyl-d14	*90*	*41 - 129*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-12**					
Laboratory ID:	06-183-08					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*59*	*27 - 106*				
Pyrene-d10	*67*	*35 - 98*				
Terphenyl-d14	*76*	*41 - 129*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

cPAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0620W1					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	6-20-19	6-21-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*50*	*27 - 106*				
Pyrene-d10	*87*	*35 - 98*				
Terphenyl-d14	*98*	*41 - 129*				

Date of Report: June 27, 2019
Samples Submitted: June 19, 2019
Laboratory Reference: 1906-183
Project: 17-06520-000

cPAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0620W1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	**0.528**	**0.506**	0.500	0.500	106	101	59 - 127	4	24	
Chrysene	**0.466**	**0.457**	0.500	0.500	93	91	57 - 122	2	24	
Benzo[b]fluoranthene	**0.518**	**0.537**	0.500	0.500	104	107	58 - 123	4	26	
Benzo(j,k)fluoranthene	**0.513**	**0.467**	0.500	0.500	103	93	60 - 123	9	22	
Benzo[a]pyrene	**0.501**	**0.488**	0.500	0.500	100	98	54 - 121	3	24	
Indeno(1,2,3-c,d)pyrene	**0.497**	**0.507**	0.500	0.500	99	101	55 - 125	2	26	
Dibenz[a,h]anthracene	**0.494**	**0.501**	0.500	0.500	99	100	57 - 127	1	25	
Surrogate:										
2-Fluorobiphenyl					*65*	*71*	*27 - 106*			
Pyrene-d10					*84*	*84*	*35 - 98*			
Terphenyl-d14					*100*	*99*	*41 - 129*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Herrera
Project Number: 17-06520-000
Project Name: Pacific Park
Project Manager: George Iftner
Sampled by: George, Kyle

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 06-183

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	~~Total~~ MTCA Metals Dissolved	TCLP Metals	HEM (oil and grease) 1664A	cPAHs				% Moisture
1	MW-2	6/18/19	11:15	Groundwater	6					X										X			X				
2	MW-4		12:40		6																						
3	MW-5		14:35		6																						
4	MW-6		13:35		6																						
5	MW-9		15:39		6																						
6	MW-10		16:00		11			X	X																		
7	MW-11		13:00		11			X	X																		
8	MW-12		13:45		11			X	X																		
9	Blank		NA		3					X																	

	Signature	Company	Date	Time
Relinquished		Herrera	6.19.19	11:16
Received	Eileen Clark	Alpha	6/19/19	11:16
Relinquished	Eileen Clark	Alpha	6/19/19	11:55
Received		OSE	6/19/19	1155
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
- Hold MW-10, 11, 12 for PCBs
- All metal samples were field filtered

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 18, 2019

George Iftner
Herrera Environmental Consultants, Inc.
2200 6th Avenue, Suite 1100
Seattle, WA 98121

Re: Analytical Data for Project 17-06520-000
Laboratory Reference No. 1907-109

Dear George:

Enclosed are the analytical results and associated quality control data for samples submitted on July 10, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

Case Narrative

Samples were collected on July 10, 2019 and received by the laboratory on July 10, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW1**					
Laboratory ID:	07-109-01					
Gasoline	**ND**	100	NWTPH-Gx	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*59-122*				
Client ID:	**SW2**					
Laboratory ID:	07-109-02					
Gasoline	**ND**	100	NWTPH-Gx	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*59-122*				
Client ID:	**SW3**					
Laboratory ID:	07-109-03					
Gasoline	**ND**	100	NWTPH-Gx	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*59-122*				
Client ID:	**SW4**					
Laboratory ID:	07-109-04					
Gasoline	**ND**	100	NWTPH-Gx	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*59-122*				

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

GASOLINE RANGE ORGANICS
NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0711W1					
Gasoline	**ND**	100	NWTPH-Gx	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*59-122*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-109-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*100*	*96*	*59-122*			

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW1**					
Laboratory ID:	07-109-01					
Diesel Range Organics	**ND**	0.28	NWTPH-Dx	7-11-19	7-15-19	
Lube Oil Range Organics	**0.49**	0.45	NWTPH-Dx	7-11-19	7-15-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**SW2**					
Laboratory ID:	07-109-02					
Diesel Range Organics	**ND**	0.29	NWTPH-Dx	7-11-19	7-15-19	
Lube Oil Range Organics	**ND**	0.47	NWTPH-Dx	7-11-19	7-15-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				
Client ID:	**SW3**					
Laboratory ID:	07-109-03					
Diesel Range Organics	**ND**	0.31	NWTPH-Dx	7-11-19	7-17-19	
Lube Oil Range Organics	**ND**	0.50	NWTPH-Dx	7-11-19	7-17-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*87*	*50-150*				
Client ID:	**SW4**					
Laboratory ID:	07-109-04					
Diesel Range Organics	**ND**	0.29	NWTPH-Dx	7-11-19	7-15-19	
Lube Oil Range Organics	**0.59**	0.46	NWTPH-Dx	7-11-19	7-15-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0711W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	7-11-19	7-12-19	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	7-11-19	7-12-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*74*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	SB0711W1										
	ORIG	DUP									
Diesel Fuel #2	**0.871**	**0.817**	NA	NA		NA		NA	6	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*84*	*87*	*50-150*			

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW1**					
Laboratory ID:	07-109-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloromethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Acetone	ND	6.5	EPA 8260C	7-11-19	7-11-19	
Iodomethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Vinyl Acetate	ND	1.5	EPA 8260C	7-11-19	7-11-19	
2,2-Dichloropropane	ND	0.26	EPA 8260C	7-11-19	7-11-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Butanone	ND	5.0	EPA 8260C	7-11-19	7-11-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroform	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Benzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Trichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Dibromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Toluene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW1**					
Laboratory ID:	07-109-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Hexanone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-11-19	7-11-19	
o-Xylene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Styrene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromoform	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Naphthalene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*75-127*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*99*	*78-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW2**					
Laboratory ID:	07-109-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloromethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Acetone	ND	6.5	EPA 8260C	7-11-19	7-11-19	
Iodomethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Vinyl Acetate	ND	1.5	EPA 8260C	7-11-19	7-11-19	
2,2-Dichloropropane	ND	0.26	EPA 8260C	7-11-19	7-11-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Butanone	ND	5.0	EPA 8260C	7-11-19	7-11-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroform	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Benzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Trichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Dibromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Toluene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW2**					
Laboratory ID:	07-109-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Hexanone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-11-19	7-11-19	
o-Xylene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Styrene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromoform	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Naphthalene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*75-127*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW3**					
Laboratory ID:	07-109-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloromethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Acetone	ND	6.5	EPA 8260C	7-11-19	7-11-19	
Iodomethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Vinyl Acetate	ND	1.5	EPA 8260C	7-11-19	7-11-19	
2,2-Dichloropropane	ND	0.26	EPA 8260C	7-11-19	7-11-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Butanone	ND	5.0	EPA 8260C	7-11-19	7-11-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroform	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Benzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Trichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Dibromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Toluene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW3**					
Laboratory ID:	07-109-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Hexanone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-11-19	7-11-19	
o-Xylene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Styrene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromoform	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Naphthalene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*75-127*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*98*	*78-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW4**					
Laboratory ID:	07-109-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloromethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Acetone	ND	6.5	EPA 8260C	7-11-19	7-11-19	
Iodomethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Vinyl Acetate	ND	1.5	EPA 8260C	7-11-19	7-11-19	
2,2-Dichloropropane	ND	0.26	EPA 8260C	7-11-19	7-11-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Butanone	ND	5.0	EPA 8260C	7-11-19	7-11-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroform	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Benzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Trichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Dibromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Toluene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	

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Project: 17-06520-000

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW4**					
Laboratory ID:	07-109-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Hexanone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-11-19	7-11-19	
o-Xylene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Styrene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromoform	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Naphthalene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*75-127*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*98*	*78-125*				

Date of Report: July 18, 2019
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Project: 17-06520-000

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	07-109-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloromethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Acetone	ND	6.5	EPA 8260C	7-11-19	7-11-19	
Iodomethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Vinyl Acetate	ND	1.5	EPA 8260C	7-11-19	7-11-19	
2,2-Dichloropropane	ND	0.26	EPA 8260C	7-11-19	7-11-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Butanone	ND	5.0	EPA 8260C	7-11-19	7-11-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroform	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Benzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Trichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Dibromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Toluene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	07-109-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Hexanone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-11-19	7-11-19	
o-Xylene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Styrene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromoform	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Naphthalene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*75-127*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*98*	*78-125*				

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0711W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloromethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Vinyl Chloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Acetone	ND	6.5	EPA 8260C	7-11-19	7-11-19	
Iodomethane	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Carbon Disulfide	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methylene Chloride	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Vinyl Acetate	ND	1.5	EPA 8260C	7-11-19	7-11-19	
2,2-Dichloropropane	ND	0.26	EPA 8260C	7-11-19	7-11-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Butanone	ND	5.0	EPA 8260C	7-11-19	7-11-19	
Bromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chloroform	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Benzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Trichloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Dibromomethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromodichloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Methyl Isobutyl Ketone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Toluene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-11-19	7-11-19	

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0711W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Tetrachloroethene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Hexanone	ND	2.6	EPA 8260C	7-11-19	7-11-19	
Dibromochloromethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Chlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Ethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
m,p-Xylene	ND	0.40	EPA 8260C	7-11-19	7-11-19	
o-Xylene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Styrene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromoform	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Isopropylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Bromobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Propylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
tert-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
sec-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
p-Isopropyltoluene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
n-Butylbenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	7-11-19	7-11-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
Naphthalene	ND	1.0	EPA 8260C	7-11-19	7-11-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*75-127*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*101*	*78-125*				

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

VOLATILE ORGANICS EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0711W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**7.84**	**7.82**	10.0	10.0	78	78	63-130	0	17	
Benzene	**8.52**	**8.55**	10.0	10.0	85	86	76-125	0	19	
Trichloroethene	**9.85**	**9.92**	10.0	10.0	99	99	76-121	1	18	
Toluene	**9.28**	**9.22**	10.0	10.0	93	92	80-124	1	18	
Chlorobenzene	**9.76**	**9.92**	10.0	10.0	98	99	75-120	2	19	
Surrogate:										
Dibromofluoromethane					*100*	*101*	*75-127*			
Toluene-d8					*102*	*102*	*80-127*			
4-Bromofluorobenzene					*99*	*101*	*78-125*			

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW1**					
Laboratory ID:	07-109-01					
Arsenic	**ND**	3.0	EPA 200.8		7-15-19	
Cadmium	**ND**	4.0	EPA 200.8		7-15-19	
Chromium	**ND**	10	EPA 200.8		7-15-19	
Lead	**ND**	1.0	EPA 200.8		7-15-19	
Mercury	**ND**	0.50	EPA 7470A		7-15-19	
Client ID:	**SW2**					
Laboratory ID:	07-109-02					
Arsenic	**ND**	3.0	EPA 200.8		7-15-19	
Cadmium	**ND**	4.0	EPA 200.8		7-15-19	
Chromium	**ND**	10	EPA 200.8		7-15-19	
Lead	**ND**	1.0	EPA 200.8		7-15-19	
Mercury	**ND**	0.50	EPA 7470A		7-15-19	
Client ID:	**SW3**					
Laboratory ID:	07-109-03					
Arsenic	**ND**	3.0	EPA 200.8		7-15-19	
Cadmium	**ND**	4.0	EPA 200.8		7-15-19	
Chromium	**ND**	10	EPA 200.8		7-15-19	
Lead	**ND**	1.0	EPA 200.8		7-15-19	
Mercury	**ND**	0.50	EPA 7470A		7-15-19	
Client ID:	**SW4**					
Laboratory ID:	07-109-04					
Arsenic	**ND**	3.0	EPA 200.8		7-15-19	
Cadmium	**ND**	4.0	EPA 200.8		7-15-19	
Chromium	**ND**	10	EPA 200.8		7-15-19	
Lead	**ND**	1.0	EPA 200.8		7-15-19	
Mercury	**ND**	0.50	EPA 7470A		7-15-19	

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

DISSOLVED METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0715D1					
Arsenic	**ND**	3.0	EPA 200.8		7-15-19	
Cadmium	**ND**	4.0	EPA 200.8		7-15-19	
Chromium	**ND**	10	EPA 200.8		7-15-19	
Lead	**ND**	1.0	EPA 200.8		7-15-19	
Laboratory ID:	MB0715D1					
Mercury	**ND**	0.50	EPA 7470A		7-15-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-109-01										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	07-109-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-109-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**86.2**	**71.6**	80.0	80.0	ND	**108**	**90**	75-125	19	20	
Cadmium	**80.0**	**66.4**	80.0	80.0	ND	**100**	**83**	75-125	19	20	
Chromium	**79.0**	**65.8**	80.0	80.0	ND	**99**	**82**	75-125	18	20	
Lead	**84.8**	**70.8**	80.0	80.0	ND	**106**	**89**	75-125	18	20	
Laboratory ID:	07-109-01										
Mercury	**10.6**	**11.3**	12.5	12.5	ND	**85**	**91**	75-125	7	20	

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW1**					
Laboratory ID:	07-109-01					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*68*	*27 - 106*				
Pyrene-d10	*78*	*35 - 98*				
Terphenyl-d14	*97*	*41 - 129*				

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW2**					
Laboratory ID:	07-109-02					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*27 - 106*				
Pyrene-d10	*81*	*35 - 98*				
Terphenyl-d14	*103*	*41 - 129*				

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW3**					
Laboratory ID:	07-109-03					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*57*	*27 - 106*				
Pyrene-d10	*68*	*35 - 98*				
Terphenyl-d14	*88*	*41 - 129*				

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

cPAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW4**					
Laboratory ID:	07-109-04					
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	7-11-19	7-11-19	
Chrysene	**ND**	0.011	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	7-11-19	7-11-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	7-11-19	7-11-19	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*61*	*27 - 106*				
Pyrene-d10	*74*	*35 - 98*				
Terphenyl-d14	*94*	*41 - 129*				

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

cPAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0711W2					
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Chrysene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	7-11-19	7-11-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*37*	*27 - 106*				
Pyrene-d10	*73*	*35 - 98*				
Terphenyl-d14	*89*	*41 - 129*				

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

cPAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0711W2									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	**0.502**	**0.504**	0.500	0.500	100	101	59 - 127	0	24	
Chrysene	**0.438**	**0.466**	0.500	0.500	88	93	57 - 122	6	24	
Benzo[b]fluoranthene	**0.444**	**0.492**	0.500	0.500	89	98	58 - 123	10	26	
Benzo(j,k)fluoranthene	**0.514**	**0.476**	0.500	0.500	103	95	60 - 123	8	22	
Benzo[a]pyrene	**0.464**	**0.476**	0.500	0.500	93	95	54 - 121	3	24	
Indeno(1,2,3-c,d)pyrene	**0.493**	**0.498**	0.500	0.500	99	100	55 - 125	1	26	
Dibenz[a,h]anthracene	**0.481**	**0.490**	0.500	0.500	96	98	57 - 127	2	25	
Surrogate:										
2-Fluorobiphenyl					*59*	*59*	*27 - 106*			
Pyrene-d10					*77*	*77*	*35 - 98*			
Terphenyl-d14					*92*	*95*	*41 - 129*			

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

HARDNESS
EPA 200.7/SM 2340B

Matrix: Water
Units: mg eqt. CaCO3/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW1**					
Laboratory ID:	07-109-01					
Hardness	**59**	1.0	200.7/SM 2340B	7-12-19	7-12-19	
Client ID:	**SW2**					
Laboratory ID:	07-109-02					
Hardness	**59**	1.0	200.7/SM 2340B	7-12-19	7-12-19	
Client ID:	**SW3**					
Laboratory ID:	07-109-03					
Hardness	**61**	1.0	200.7/SM 2340B	7-12-19	7-12-19	
Client ID:	**SW4**					
Laboratory ID:	07-109-04					
Hardness	**55**	1.0	200.7/SM 2340B	7-12-19	7-12-19	

Date of Report: July 18, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109
Project: 17-06520-000

HARDNESS
EPA 200.7/SM 2340B
QUALITY CONTROL

Matrix: Water
Units: mg eqt. CaCO3/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0712WH1					
Hardness	**ND**	1.0	200.7/SM 2340B	7-12-19	7-12-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-112-01										
	ORIG	DUP									
Hardness	**5.35**	**5.26**	NA		NA	NA		NA	2	20	
MATRIX SPIKES											
Laboratory ID:	07-112-01										
	MS	MSD	MS	MSD		MS	MSD				
Hardness	**133**	**133**	132	132	5.35	97	97	75-125	0	20	
SPIKE BLANK											
Laboratory ID:	SB0712WH1										
	SB		SB			SB					
Hardness	**125**		132		NA	95		85-115	NA	NA	

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Herrera
Project Number: 17-0520-000
Project Name: Pacific Park
Project Manager: George Iftner
Sampled by: Kyle Bliss

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 07-109

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved MTCA Metals *	cPAHs	Hardness		% Moisture
1	SW1	7/10/19	12:25	Water	12			X	X	X													X	X	X		
2	SW2	"	11:55	"	"			X	X	X													X	X	X		
3	SW3	"	11:35	"	"			X	X	X													X	X	X		
4	SW4	"	12:50	"	"			X	X	X													X	X	X		
5	Trip Blank	"	X	"	3					X																	

	Signature	Company	Date	Time
Relinquished		Herrera	7.10.19	15:23
Received			7/10/19	1523
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
HOLD samples for PCBs.
* Metals samples Field Filtered

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 29, 2019

George Iftner
Herrera Environmental Consultants, Inc.
2200 6th Avenue, Suite 1100
Seattle, WA 98121

Re: Analytical Data for Project 17-06520-000
Laboratory Reference No. 1907-109B

Dear George:

Enclosed are the analytical results and associated quality control data for samples submitted on July 10, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: July 29, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109B
Project: 17-06520-000

Case Narrative

Samples were collected on July 10, 2019 and received by the laboratory on July 10, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: July 29, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109B
Project: 17-06520-000

PCBs EPA 8082A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SW1**					
Laboratory ID:	07-109-01					
Aroclor 1016	**ND**	0.051	EPA 8082A	7-22-19	7-23-19	
Aroclor 1221	**ND**	0.051	EPA 8082A	7-22-19	7-23-19	
Aroclor 1232	**ND**	0.051	EPA 8082A	7-22-19	7-23-19	
Aroclor 1242	**ND**	0.051	EPA 8082A	7-22-19	7-23-19	
Aroclor 1248	**ND**	0.051	EPA 8082A	7-22-19	7-23-19	
Aroclor 1254	**ND**	0.051	EPA 8082A	7-22-19	7-23-19	
Aroclor 1260	**ND**	0.051	EPA 8082A	7-22-19	7-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*96*	*50-153*				
Client ID:	**SW4**					
Laboratory ID:	07-109-04					
Aroclor 1016	**ND**	0.058	EPA 8082A	7-22-19	7-23-19	
Aroclor 1221	**ND**	0.058	EPA 8082A	7-22-19	7-23-19	
Aroclor 1232	**ND**	0.058	EPA 8082A	7-22-19	7-23-19	
Aroclor 1242	**ND**	0.058	EPA 8082A	7-22-19	7-23-19	
Aroclor 1248	**ND**	0.058	EPA 8082A	7-22-19	7-23-19	
Aroclor 1254	**ND**	0.058	EPA 8082A	7-22-19	7-23-19	
Aroclor 1260	**ND**	0.058	EPA 8082A	7-22-19	7-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*92*	*50-153*				

Date of Report: July 29, 2019
Samples Submitted: July 10, 2019
Laboratory Reference: 1907-109B
Project: 17-06520-000

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0722W1					
Aroclor 1016	**ND**	0.050	EPA 8082A	7-22-19	7-23-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	7-22-19	7-23-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	7-22-19	7-23-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	7-22-19	7-23-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	7-22-19	7-23-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	7-22-19	7-23-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	7-22-19	7-23-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*92*	*50-153*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0722W1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	**0.523**	**0.511**	0.500	0.500	N/A	**105**	**102**	78-129	2	12	
Surrogate:											
DCB						*103*	*97*	*50-153*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Herrera
Project Number: 17-0520-000
Project Name: Pacific Park
Project Manager: George Iftner
Sampled by: Kyle Bliss

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 07-109

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved MTCA Metals *	cPAHs	Hardness		% Moisture
1	SW1	7/10/19	12:25	Water	12			X	X	X					(X)								X	X	X		
2	SW2		11:55					X	X	X													X	X	X		
3	SW3		11:35					X	X	X													X	X	X		
4	SW4		12:50					X	X	X					(X)								X	X	X		
5	Trip Blank		X		3					X																	

	Signature	Company	Date	Time
Relinquished		Herrera	7.10.19	15:23
Received			7/10/19	1523
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
HOLD samples for PCBs.
* Metals samples Field Filtered
(X) Added 7/19/19. DB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

APPENDIX B

Soil Vapor Monitoring Data

Pacific Park
Gas Monitoring Data Sheet

Gas Probe ID: MW6 WL = 6.64'
Sample ID: NA
Date & Time: 6/18/19 10:50 Am
Total Casing Volume (cc): 618 cc/ft x 6.64' = 4,100 = 1 well Vol

Canister ID: NA
Initial Canister Pressure: NA
Final Canister Pressure: NA
Field Personnel: _G. Iftner_

Casing Volume Purged	Volume Purged (cc)	Purge Rate (ml/min)	Purge Time	CH_4 (% volume)	CO_2 (% volume)	O_2 (% volume)	H_2S (ppmv)
0	0	3000	0 sec	0	0	20.1	0
1/4	1,025	3000	20 sec	0	2.1	18.7	0
1/2	2,050	3000	46 sec	0	5.1	12.1	0
3/4	3,075	3000	60 sec	0	5.4	11.3	0
1	4,100	3000	80 sec	0	5.5	11.0	0
1 1/4	5,125	3000	100 sec	0	5.6	10.8	0
1 1/2	6,150	3000	120 sec	0	5.6	10.7	0
1 3/4	7,175	3000	140 sec	0	5.7	10.6	0
2	8,200	3000	160 sec	0	5.7	10.6	0
2 1/4	END Purge	3000	sec				
2 1/2		3000	sec				
2 3/4		3000	sec				
3		3000	sec				

Comments: static WL = 6.64' 1 well vol = 4,100/3,000 ml/min purge = 1.37 min = 82 Seconds
Rounded to 80 seconds.
Barometric Pressure. 30.15"

Equipment Used: SKC Pump, Gem 2000+, Water Level Meter

Pacific Park
Gas Monitoring Data Sheet

Gas Probe ID: MW-9 WL = 6.35'
Sample ID: NA
Date & Time: 6/18/19 11:20 Am
Total Casing Volume (cc): 618 cc/ft x 6.35' = 3,925 (1 well vol.)

Canister ID: NA
Initial Canister Pressure: NA
Final Canister Pressure: NA
Field Personnel: _G. Iftner_

Casing Volume Purged	Volume Purged (cc)	Purge Rate (ml/min)	Purge Time	CH_4 (% volume)	CO_2 (% volume)	O_2 (% volume)	H_2S (ppmv)
0	0	3000	0 sec	0	0	20.5	0
1/4	981	3000	20 sec	0	0.4	19.6	0
1/2	1,962	3000	40 sec	0	0.1	20.6	0
3/4	2,943	3000	60 sec	0	0.2	20.5	0
1	3,924	3000	80 sec	0	0.8	20.0	0
1 1/4	4,905	3000	100 sec	0	1.8	18.9	0
1 1/2	5,889	3000	120 sec	0	2.0	18.8	0
1 3/4	6,870	3000	140 sec	0	2.7	18.1	0
2	7,851	3000	160 sec	0	2.9	17.9	0
2 1/4	End purge	3000	sec				
2 1/2		3000	sec				
2 3/4		3000	sec				
3		3000	sec				

Comments: Static WL = 6.35' 3925 cc/3000 ml/min purge rate = 1.31 min = 78.6
Rounded to 80 seconds.
Barometric Pressure 30.15" Hg.

Equipment Used: SKC Pump, Gem 2000+, Water Level Meter

Pacific Park
Gas Monitoring Data Sheet

Gas Probe ID: MW11 WL = 4.34'
Sample ID: NA
Date & Time: 6/18/19 12:20 pm
Total Casing Volume (cc): 618 x 4.34 = 2,682 cc³ = 1 well vol.

Canister ID: NA
Initial Canister Pressure: NA
Final Canister Pressure: NA
Field Personnel: _G. Iftner_

Casing Volume Purged	Volume Purged (cc)	Purge Rate (ml/min)	Purge Time	CH_4 (% volume)	CO_2 (% volume)	O_2 (% volume)	H_2S (ppmv)
0	0	3000	0 sec	0	0	20.5	0
1/4	670	3000	14 sec	0	0.5	20.8	0
1/2	1,340	3000	28 sec	0	0.6	20.0	0
3/4	2,010	3000	42 sec	0	3.9	16.8	0
1	2,680	3000	56 sec	0	5.4	15.3	0
1 1/4	3,350	3000	70 sec	0	5.7	15.1	0
1 1/2	4,020	3000	84 sec	0	5.7	15.1	0
1 3/4	4,690	3000	98 sec	0	5.8	14.9	0
2	5,360	3000	112 sec	0	5.9	14.9	0
2 1/4	End purge.	3000	sec				
2 1/2		3000	sec				
2 3/4		3000	sec				
3		3000	sec				

Comments: static WL = 4.34 2,680 cc³/3,000 ml/min. purge = 0.89 min = 54 seconds rounded to ~~56~~ seconds.
Barometric Pressure 30.15" Hg.

Equipment Used: SKC Pump, Gem 2000+, Water Level Meter

Pacific Park
Gas Monitoring Data Sheet

Gas Probe ID: MW 12
Sample ID: NA
Date & Time: 6/18/14 13:06

WL = 4.02

Total Casing Volume (cc): 6.18 x 4.02 = 1,484 = 1 well vol.

Canister ID: NA
Initial Canister Pressure: NA
Final Canister Pressure: NA

Field Personnel: _G. Iftner_

Casing Volume Purged	Volume Purged (cc)	Purge Rate (ml/min)	Purge Time	CH_4 (% volume)	CO_2 (% volume)	O_2 (% volume)	H_2S (ppmv)
0	0	3000	0 sec	0	0	20.8	0
1/4	621	3000	13 sec	0	0.1	20.4	0
1/2	1,242	3000	26 sec	0	0.1	~~20.6~~ 20.3	0
3/4	1,863	3000	39 sec	0	0.2	20.3	0
1	2,484	3000	52 sec	0	0.1	20.3	0
1 1/4	3,105	3000	65 sec	0	0.2	20.0	0
1 1/2	3,726	3000	78 sec	0	0.1	20.5	0
1 3/4	4,347	3000	91 sec	0	0.1	20.6	0
2	4,968	3000	104 sec	0	0.1	20.4	0
2 1/4	End purge	3000	sec				
2 1/2		3000	sec				
2 3/4		3000	sec				
3		3000	sec				

Comments: static WL = 4.04 2,484 well vol / 3000 ml/min purge = 0.83 min = 50 seconds
Rounded up to 52 seconds

Barometric pressure 30.15" Hg

Equipment Used: SKC Pump, Gem 2000+, Water Level Meter