

## MEMORANDUM

**To:** Ron Paananen, HDR  
**Contract & Task Order:** DA Deliverable 4.1.19  
**From:** Joseph Sawdey, LG, LHG  
Meg Strong, LG, LHG  
Shannon & Wilson  
**Date:** June 23, 2023  
**File Code:**  
**Copies To:** Robyn Boyd  
Dave Becher  
Margaret Kucharski

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**Subject: Groundwater Monitoring Memorandum – Quarter No. 5, Voluntary Cleanup Program NW3242, Montlake Gas Station, Seattle, Washington**

### Background

In 2019, the Washington State Department of Transportation (WSDOT) entered the Former Montlake Gas Station property located in Seattle, Washington (site), into the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP).

As part of the VCP application, Shannon & Wilson submitted a Remedial Investigation (RI) work plan and a subsequent RI report to Ecology, on behalf of WSDOT. The RI report included investigation data that was used to characterize the nature and extent of petroleum hydrocarbon contamination in soil and groundwater associated with historic fueling operations at the site (Shannon & Wilson, 2020).

In 2021, PBS Engineering and Environmental prepared and submitted to Ecology a Remedial Action Plan detailing the proposed remediation excavation activities (PBS, 2021a). In August and September 2021, PBS oversaw the closure and removal of the site's underground storage tanks and piping, as well as the excavation of the associated petroleum-contaminated soil source zone (source zone), as documented in the Remedial Action Completion Report (PBS, 2021b). Soil compliance has been achieved at the site, as documented by confirmation sampling performed by PBS during the remedial excavation.

Groundwater compliance is currently being evaluated. On April 19 and 20, 2022, Shannon & Wilson installed additional compliance groundwater monitoring (CGM) wells at the site following Ecology recommendations (Shannon & Wilson, 2022a). The CGM well network

for the site consists of six monitoring wells: MW-2-19, MW-3-19, MW-6-22, MW-7-22, MW-8-22, and MW-9-22. The monitoring wells have been surveyed and locations are depicted in Exhibit 1. This memorandum presents the results of Quarter No. 5 CGM and documents the continued effect(s) of the source zone removal on site groundwater quality. Results of the Quarter Nos. 1 through 4 CGM have been presented previously under a separate cover (Shannon & Wilson, 2022b, 2022c, 2023a, and 2023b).

## **Quarter No. 5 Groundwater Monitoring Activities**

### ***Well Gauging***

On May 17, 2023, Shannon & Wilson gauged each of the CGM wells to monitor for the presence of free product and to measure groundwater elevations. Measurable free product was not encountered within any of the six CGM wells during Quarter No. 5; however, a petroleum odor and sheen were observed at MW-3-19.

### ***Groundwater Sampling***

On May 17, 2023, Shannon & Wilson purged each of the CGM wells using a peristaltic pump with a flow-through cell and a water quality meter to measure the following field parameters: temperature, oxidation-reduction potential, pH, conductivity, dissolved oxygen, turbidity, salinity, and total dissolved solids. Field parameters collected during purging of the CGM wells can be found in Attachment 1 – Groundwater Sampling Field Forms.

Upon stabilization of the field parameters during well purging (indicating steady groundwater flow to the well), groundwater samples were collected from each of the six CGM wells by discharging groundwater from the end of the peristaltic tubing into clean, laboratory-supplied containers. Collected groundwater samples were immediately put on ice and stored within an insulated cooler. Groundwater samples from each of the CGM wells were delivered to OnSite Environmental Inc. of Redmond, Washington, under standard chain-of-custody procedures and analyzed for:

- Gasoline-range petroleum hydrocarbons using Ecology's Northwest Total Petroleum Hydrocarbon (NWTPH)-Gasoline Extended Method;
- Benzene, toluene, ethylbenzene, and xylene (BTEX) by U.S. Environmental Protection Agency (EPA) 8260 Method;
- Diesel- and oil-range petroleum hydrocarbons using Ecology's NWTPH-Diesel Extended Method; and
- Total and dissolved arsenic by EPA Method 200.8.

For complete details on the groundwater sampling methodology, refer to the Sample Collection and Chemical Testing sections of the Work Plan (Shannon & Wilson, 2019).

### ***ORC Sock Deployment***

Following the completion of the Quarter No. 5 well gauging and groundwater sampling activities, Shannon & Wilson installed three Regenesys oxygen-reducing compound (ORC®) socks below the water table and within the screened portion of MW-3-19 due to continued

contaminant detections at the well. The ORC<sup>®</sup> socks are designed by Regenesis to expedite and aid in the natural aerobic degradation process of petroleum hydrocarbon contaminants.

## **Quarter No. 5 Results and Interpretation**

### ***Groundwater Elevation and Flow Directions***

Measured groundwater elevations for Quarter No. 5 are reported in Exhibit 2 and displayed in Exhibit 1. Groundwater elevations in North American Vertical Datum (of 1988) during May 2023 ranged from as low as 41.6 feet (MW-3-19) to as high as 49.6 feet above mean sea level (MW-2-19). Using the measured groundwater elevations, a groundwater potentiometric surface was interpolated with associated groundwater flow directions inferred to occur perpendicular to the equipotential lines comprising the potentiometric surface (see Exhibit 1). The groundwater elevation measured at MW-3-19 was again significantly lower with less seasonal fluctuation compared to the other CGM wells (see Exhibit 2). The much lower and static nature of the groundwater elevations monitored at MW-3-19 is suggestive of hydraulic isolation from the more uniform groundwater flow regime encountered across the site.

The groundwater setting at the site observed during Quarter No. 5 is consistent with that observed during the RI and previous quarterly CGM events (Shannon & Wilson, 2020, 2022b, 2022c, 2023a, and 2023b). In general, groundwater elevations measured in Quarter No. 5 were lower by approximately 0.2 to 0.5 feet, compared to groundwater elevations measured during Quarter No. 4. The lower groundwater elevations observed likely reflect the shallow groundwater response to the beginning of the local dry season.

The groundwater elevation observed at MW-3-19 only decreased by 0.03 feet between Quarter No. 4 and 5 of the groundwater monitoring events (February to May 2023). This relatively low fluctuation in groundwater elevation is lower and of a different nature compared to the other CGM wells, as discussed above.

The estimated groundwater flow direction for Quarter No. 5 is uniformly north to northwest, consistent with previous monitoring events when MW-3-19 was included as part of the potentiometric surface (Shannon & Wilson, 2022b and 2023a).

### ***Groundwater Sampling Results***

The laboratory analytical results for collected groundwater samples are summarized in Exhibit 3. The laboratory report is included as Attachment 2. Exhibit 1 indicates which monitoring wells had groundwater sample contaminant concentrations that exceed applicable cleanup levels (CULs) during the May 2023 sampling event.

### ***Groundwater Sampling Interpretation***

Groundwater samples collected from the CGM wells located within the property boundary (MW-2-19, MW-6-22, MW-7-22, MW-8-22, and MW-9-22) had non-detectable concentrations of petroleum hydrocarbons (gasoline-, diesel-, and oil-range) and BTEX. MW-8-22 and MW-9-22 had detectable concentrations of total arsenic; however, the concentrations were below applicable CULs and dissolved arsenic concentrations were less than the total concentrations.

Groundwater samples from one CGM well, MW-3-19, contained contaminant concentrations that exceeded applicable CULs (Exhibits 1 and 3). During Quarter Nos. 2 and 3, groundwater samples from MW-3-19 were not collected because measurable free product was detected in the well. During Quarters No. 4 and 5, a petroleum sheen was observed but with no measurable product, and thus, groundwater samples were collected and analyzed. Concentrations of gasoline- and lube oil-range petroleum hydrocarbons, and total arsenic exceedances increased at MW-3-19 compared to Quarter No. 4 (February 2023). However, diesel-range petroleum hydrocarbons exceedances detected at MW-3-19 during Quarter No. 4 were a non-detectable concentration, although the method detection level is elevated. The diesel-range petroleum hydrocarbon concentration continues to be flagged as being influenced by the gasoline-range petroleum hydrocarbons (Exhibit 3). MW-3-19 is the most downgradient CGM well at the site, the furthest from the remedial excavation area, and is located outside the property boundary. The contaminant concentrations observed at MW-3-19 may be related to the observed degree of hydraulic isolation in the vicinity of MW-3-19, which would impact timing for the remedial action to manifest near the this well.

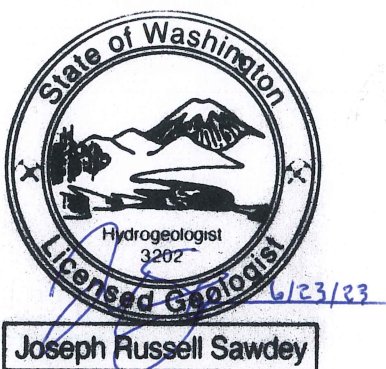
The concentration of gasoline-range petroleum hydrocarbons measured in the CGM wells over time have been summarized in trend plots, included as Exhibit 4.

The concentration of diesel-range plus oil-range petroleum hydrocarbons measured in the CGM wells over time have been summarized in trend plots, included as Exhibit 5.

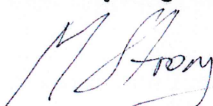
We appreciate this opportunity to provide environmental services to you for this project. If you have questions regarding this letter, please contact the undersigned at (206) 632-8020.

Sincerely,

Shannon & Wilson



Joseph Sawdey, LG, LHG  
Senior Hydrogeologist



Meg Strong, LG, LHG  
Senior Consultant

JXS:MJS:JNB/mrh:jxs

## References

- PBS Engineering and Environmental, 2021a, Remedial action plan, Montlake Gas Station, State Route 520 Montlake to Lake Washington Interchange and Bridge Replacement Project, Seattle, Washington: Report prepared by PBS, Seattle, Wash., project no. 41221.003, for Graham Contracting Ltd, Bellevue, Wash., March Seattle, Wash., March 2021.
- PBS Engineering and Environmental, 2021b, Remedial action completion report, Montlake Gas Station, State Route 520 Montlake to Lake Washington Interchange and Bridge Replacement Project, Seattle, Washington: Report prepared by PBS, Seattle, Wash., 41221.003, for Graham Contracting Ltd., Bellevue, Wash., December.
- Shannon & Wilson, 2019, Data gaps investigation work plan/sampling and analysis plan for Montlake Gas Station, SR 520 Bridge Replacement and HOV Program, Seattle, Washington: Workplan prepared by Shannon & Wilson, Seattle, Wash., 21-1-22242-101, for Washington State Department of Transportation, July.
- Shannon & Wilson, 2020, Remedial investigation report for Montlake Gas Station, SR 520 Bridge Replacement and HOV Program, Seattle, Washington: Report prepared by Shannon & Wilson, Seattle, Wash., 21-1-22242-104, for Washington State Department of Transportation, 1 v., March.
- Shannon & Wilson, 2022a, Compliance groundwater monitoring well installation exhibit for Montlake Gas Station, SR 520 Bridge Replacement and HOV Program, Seattle, Washington: Exhibit prepared by Shannon & Wilson, Seattle, Wash., 21-1-22242-104, for Washington State Department of Transportation, May 2022.
- Shannon & Wilson, 2022b, Groundwater monitoring memorandum – quarter no. 1, voluntary cleanup program NW3242, Montlake Gas Station, SR 520 Bridge Replacement and HOV Program, Seattle, Washington: Memorandum from Joseph Sawdey and Meg Strong, Shannon & Wilson, Seattle, Wash., 21-1-22242-104, to Ron Paananen, HDR, June 27.
- Shannon & Wilson, 2022c, Groundwater monitoring memorandum – quarter no. 2, voluntary cleanup program NW3242, Montlake Gas Station, SR 520 Bridge Replacement and HOV Program, Seattle, Washington: Memorandum from Joseph Sawdey and Meg Strong, Shannon & Wilson, Seattle, Wash., 21-1-22242-104, to Ron Paananen, HDR, October 6.
- Shannon & Wilson, 2023a, Groundwater monitoring memorandum – quarter no. 3, voluntary cleanup program NW3242, Montlake Gas Station, SR 520 Bridge Replacement and HOV Program, Seattle, Washington: Memorandum from Joseph Sawdey and Meg Strong, Shannon & Wilson, Seattle, Wash., 21-1-22242-104, to Ron Paananen, HDR, January 5.

Shannon & Wilson, 2023b, Groundwater monitoring memorandum – quarter no. 4, voluntary cleanup program NW3242, Montlake Gas Station, SR 520 Bridge Replacement and HOV Program, Seattle, Washington: Memorandum from Joseph Sawdey and Meg Strong, Shannon & Wilson, Seattle, Wash., 21-1-22242-104, to Ron Paananen, HDR, March 30.

## **Exhibits**

Exhibit 1 – Groundwater Potentiometric Surface Map with Groundwater Elevation

Exhibit 2 – Groundwater Level Measurements

Exhibit 3 – Summary of Groundwater Analytical Results

Exhibit 4 – Groundwater Concentration Trend Plots – Gasoline

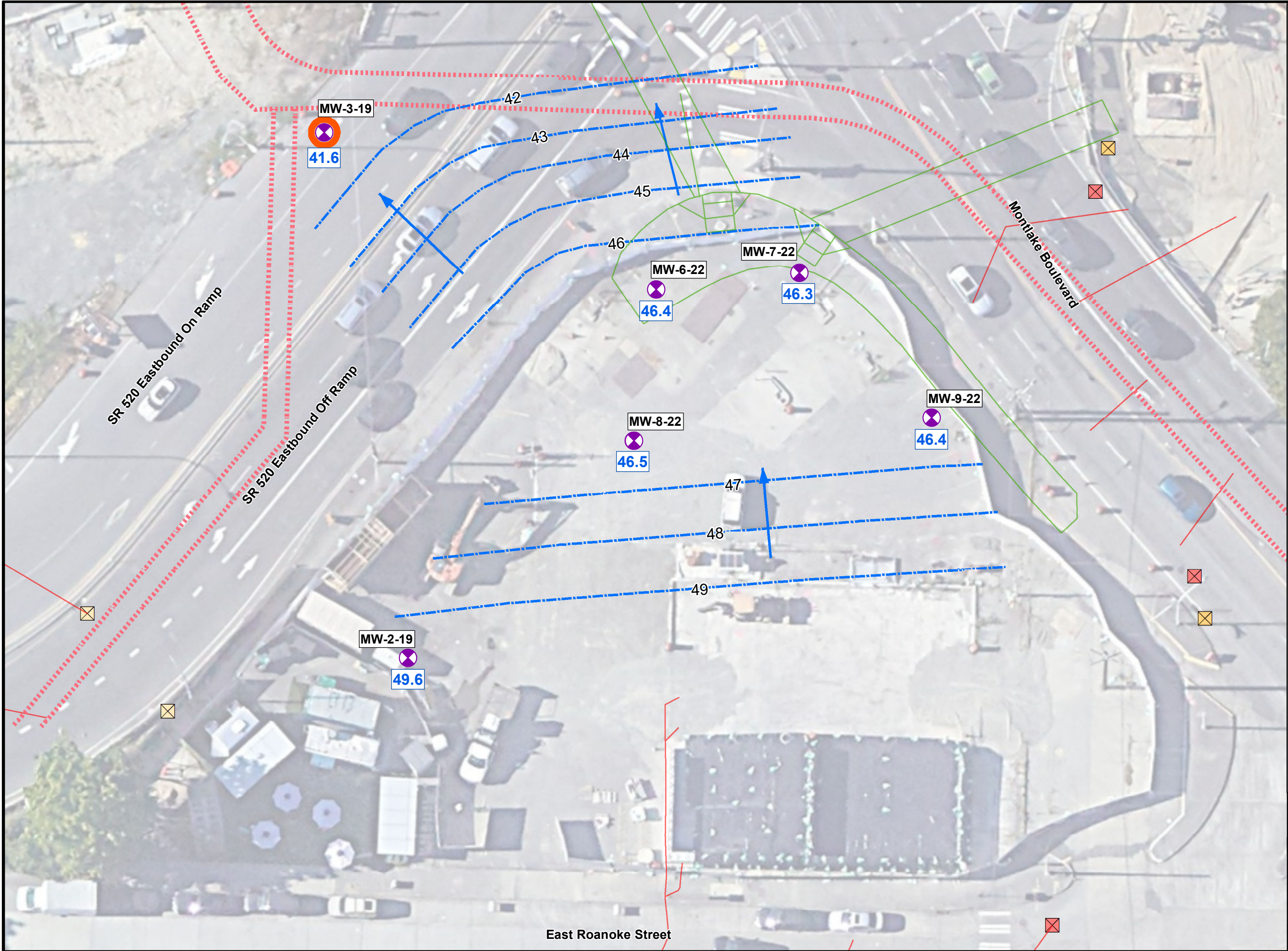
Exhibit 5 – Groundwater Concentration Trend Plots – Diesel Plus Oil

## **Attachments**

Attachment 1 – Groundwater Sampling Field Forms

Attachment 2 – Laboratory Report and Chain-of-Custody Form





## LEGEND

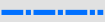
Monitoring Well Location  
and Designation



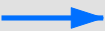
Well With Groundwater Concentrations  
Exceeding Applicable Cleanup Levels



Interpolated Groundwater Elevation  
(Feet, NAVD 88)



Interpolated Groundwater Flowline



Groundwater Elevation at  
Monitoring Well  
(May 2023)



Existing Utility - Catch Basin



Existing Utility - Inlet



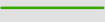
Existing Utility - Wastewater Pipe



Existing Utility - Sewer or  
Combined-Sewer Line

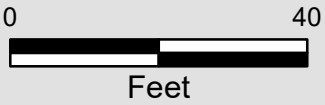


Approximate Post Construction  
Crosswalk/Sidewalk Configuration



NOTE:

All Existing Utility data should  
be considered approximate.  
City of Seattle, 2019.



SR 520 Bridge Replacement and HOV Program  
SR 520 I-5 to Montlake -I/C and Bridge Replacement  
Groundwater Monitoring Report No. 5  
2625 East Montlake Place East  
Seattle, WA

**GROUNDWATER  
POTENTIOMETRIC SURFACE MAP  
WITH GROUNDWATER ELEVATION**  
June 2023 21-1-22242-104

**SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

EXHIBIT 1



**EXHIBIT 2**  
**GROUNDWATER LEVEL MEASUREMENTS**

**SR 520 Bridge Replacement and HOV Program**  
**SR 520 I-5 to Montlake - I/C and Bridge Replacement**  
**Groundwater Monitoring Memorandum - Quarter No. 5**

| Montlake Gas Station Monitoring Well | Screened Interval (feet bgs) | Surveyed Monitoring Well Elevation <sup>1</sup> (feet) | TOC Elevation (feet) | Date       | Depth to Water (feet below TOC) | Groundwater Elevation (feet) |
|--------------------------------------|------------------------------|--|----------------------|------------|---------------------------------|------------------------------|
| MW-2-19                              | 10 to 20                     | 58.87  | 58.12                | 10/17/2019 | 10.1                            | 48.0                         |
|                                      |                              |  |                      | 5/2/2022   | 8.3                             | 49.8                         |
|                                      |                              |  |                      | 8/16/2022  | 9.4                             | 48.7                         |
|                                      |                              |  |                      | 11/15/2022 | 9.9                             | 48.2                         |
|                                      |                              |  |                      | 2/14/2023  | 8.4                             | 49.8                         |
|                                      |                              |  |                      | 5/17/2023  | 8.6                             | 49.6                         |
|                                      |                              |  |                      | 10/17/2019 | 17.4                            | 41.6                         |
|                                      |                              |  |                      | 5/2/2022   | 17.3                            | 41.8                         |
|                                      |                              |  |                      | 8/16/2022  | 17.4                            | 41.6                         |
|                                      |                              |  |                      | 11/15/2022 | 17.5                            | 41.5                         |
| MW-3-19                              | 10 to 25                     | 59.29  | 59.01                | 2/14/2023  | 17.5                            | 41.6                         |
|                                      |                              |  |                      | 5/17/2023  | 17.4                            | 41.6                         |
|                                      |                              |  |                      | 5/2/2022   | 12.2                            | 47.2                         |
|                                      |                              |  |                      | 8/16/2022  | 13.9                            | 45.5                         |
|                                      |                              |  |                      | 11/15/2022 | 14.9                            | 44.4                         |
| MW-6-22                              | 11 to 26                     | 59.71  | 59.36                | 2/14/2023  | 12.5                            | 46.8                         |
|                                      |                              |  |                      | 5/17/2023  | 13.0                            | 46.4                         |
|                                      |                              |  |                      | 5/2/2022   | 12.1                            | 47.1                         |
|                                      |                              |  |                      | 8/17/2022  | 13.8                            | 45.4                         |
|                                      |                              |  |                      | 11/15/2022 | 14.8                            | 44.4                         |
| MW-7-22                              | 10.5 to 25.5                 | 59.68  | 59.18                | 2/14/2023  | 12.4                            | 46.8                         |
|                                      |                              |  |                      | 5/17/2023  | 12.8                            | 46.3                         |
|                                      |                              |  |                      | 5/2/2022   | 11.3                            | 47.2                         |
|                                      |                              |  |                      | 8/16/2022  | 13.0                            | 45.6                         |
|                                      |                              |  |                      | 11/15/2022 | 14.0                            | 44.5                         |
| MW-8-22                              | 10.5 to 25.5                 | 58.90  | 58.55                | 2/14/2023  | 11.6                            | 46.9                         |
|                                      |                              |  |                      | 5/17/2023  | 12.1                            | 46.5                         |
|                                      |                              |  |                      | 5/2/2022   | 12.4                            | 47.2                         |
|                                      |                              |  |                      | 8/17/2022  | 14.1                            | 45.5                         |
|                                      |                              |  |                      | 11/15/2022 | 15.1                            | 44.5                         |
| MW-9-22                              | 10 to 25                     | 59.93  | 59.58                | 2/14/2023  | 12.7                            | 46.9                         |
|                                      |                              |  |                      | 5/17/2023  | 13.1                            | 46.4                         |

**NOTES:**

1 Monitoring well elevation was surveyed from the center of the well monument lid.  
The reference vertical datum is the North American Vertical Datum (of 1988).  
bgs = below ground surface; TOC = top of casing



EXHIBIT 3  
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

|                                      |             | Petroleum Hydrocarbons (µg/L)        |                                    |                                      | Volatile Organic Compounds (µg/L) <sup>3</sup> |         |              |            |          | Metals (µg/L) <sup>4</sup> |                   |
|--------------------------------------|-------------|--------------------------------------|------------------------------------|--------------------------------------|--|---------|--------------|------------|----------|----------------------------|-------------------|
| Montlake Gas Station Monitoring Well | Sample Date | Gasoline Range Organics <sup>1</sup> | Diesel Range Organics <sup>2</sup> | Lube Oil Range Organics <sup>2</sup> | Benzene  | Toluene | Ethylbenzene | m,p-Xylene | o-Xylene | Total Arsenic              | Dissolved Arsenic |
| MW-2-19                              | 10/17/2019  | <100                                 | <260                               | <420                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 5/2/2022    | <100                                 | <180                               | <240                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 8/16/2022   | <100                                 | <130                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 11/15/2022  | <100                                 | <210                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 2/14/2023   | <100                                 | <200                               | <200                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 5/17/2023   | <100                                 | <210                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
| MW-3-19 <sup>5</sup>                 | 10/17/2019  | 1400                                 | 630                                | 660                                  | 98   | <4      | 24           | 9.3        | 1.1      | 17                         | 7.4               |
|                                      | 5/2/2022    | 5800                                 | 1300 M                             | 500                                  | 170  | <10     | 190          | 220        | 3.2      | 16                         | 11                |
|                                      | 2/14/2023   | 7300                                 | 2100 M                             | 320                                  | 140  | <5.0    | 72           | 94         | 2.3      | 22                         | 13                |
|                                      | 5/17/2023   | 8400                                 | <1700 M                            | 340                                  | 100  | <20     | 79           | 120        | <4.0     | 25                         | 14                |
| MW-6-22                              | 5/2/2022    | <100                                 | 210                                | 330                                  | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 8/16/2022   | <100                                 | <130                               | 290                                  | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | 6.3                        | 4.5               |
|                                      | 11/15/2022  | <100                                 | <200                               | <200                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | 7.3                        | 4.6               |
|                                      | 2/14/2023   | <100                                 | <210                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 5/17/2023   | <100                                 | <210                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
| MW-7-22                              | 5/2/2022    | <100                                 | <170                               | <230                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 8/17/2022   | <100                                 | <130                               | 250                                  | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 11/15/2022  | <100                                 | <210                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 11/15/2022  | <100                                 | <210                               | 220                                  | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 2/14/2023   | <100                                 | <200                               | <200                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 5/17/2023   | <100                                 | <210                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
| MW-8-22                              | 5/2/2022    | <100                                 | <170                               | <220                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 5/2/2022    | <100                                 | <170                               | 240                                  | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 8/16/2022   | <100                                 | <130                               | 360                                  | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | 6.6                        | 3.8               |
|                                      | 8/16/2022   | <100                                 | <140                               | 340                                  | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | 6.5                        | 4.3               |
|                                      | 11/15/2022  | <100                                 | <200                               | <200                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | 6                          | 5.7               |
|                                      | 2/14/2023   | <100                                 | <210                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | 4.2                        | <3.0              |
|                                      | 2/14/2023   | <100                                 | <200                               | <200                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | 4.4                        | <3.0              |
|                                      | 5/17/2023   | <100                                 | <210                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | 4                          | <3.0              |
| MW-9-22                              | 5/17/2023   | <100                                 | <220                               | <220                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | 4.1                        | <3.0              |
|                                      | 5/2/2022    | <100                                 | <160                               | <220                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 8/17/2022   | <100                                 | 1900                               | <300                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 11/15/2022  | <100                                 | <210                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | <3.0              |
|                                      | 2/14/2023   | <100                                 | <210                               | <210                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | <3.3                       | 3.0               |
| Trip Blank                           | 5/17/2023   | <100                                 | <220                               | <220                                 | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | 3.9                        | <3.0              |
|                                      | 5/2/2022    | <100                                 | --                                 | --                                   | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | --                         | --                |
|                                      | 8/18/2022   | <100                                 | --                                 | --                                   | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | --                         | --                |
|                                      | 11/15/2022  | <100                                 | --                                 | --                                   | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | --                         | --                |
| MTCA Method A CUL                    | 2/14/2023   | <100                                 | --                                 | --                                   | <0.20  | <1.0    | <0.20        | <0.40      | <0.20    | --                         | --                |
|                                      |             | 1000/800*                            | 500                                | 500                                  | 5.00   | 1000    | 700          | 1000†      | 1000†    | 20§                        | 20§               |

NOTES:

1 Gasoline-range petroleum hydrocarbons using Washington State Department of Ecology's (Ecology's) NWTPH-Gasoline Extended Method

2 Diesel- and oil-range petroleum hydrocarbons using Ecology's NWTPH-Diesel Extended Method

3 Volatile organic compounds by EPA Method 8260D

4 Total and dissolved arsenic by EPA Method 200.8

5 In August and November 2022, MW-3-19 had measurable free product and was not sampled.

Highlighted text indicates the analyte was detected above the MTCA Method A CUL.

Highlighted text indicates the analyte was not detected, however the practical quantitation limit is above the MTCA Method A CUL.

**Bold** text indicates the analyte was detected above laboratory practical quantitation limit.

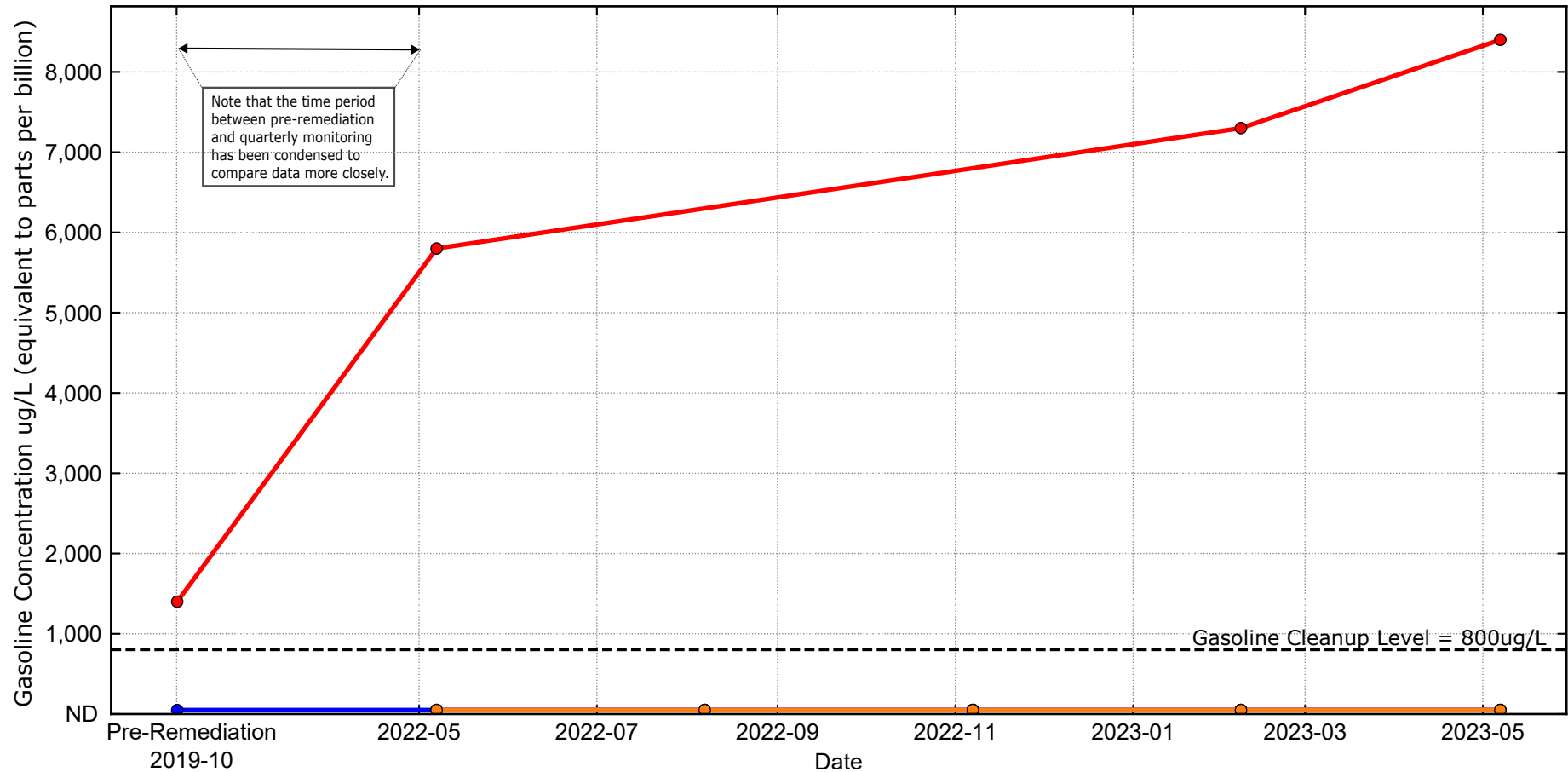
M flag indicates hydrocarbons in the gasoline range are impacting the diesel range result.

\* Cleanup level (CUL) for gasoline-range organics is 1,000 µg/L without the presence of benzene and 800 µg/L with the presence of benzene.

† MTCA Method A CUL for total xylenes is used because a MTCA Method A CUL is not established for the isomers of m-, p-, or o-xylene.

§ Site specific CUL for arsenic (total and dissolved) based on statistical analysis of natural background levels of arsenic in groundwater.

-- = not analyzed; < = not detected above laboratory reporting limit; µg/L = micrograms per liter; CUL = cleanup level; EPA = U.S. Environmental Protection Agency; MTCA = Model Toxics Control Act; NWTPH = Northwest Total Petroleum Hydrocarbon



**FIG. 4**

Note: Gasolione concentrations non detect (ND) in MW-2-19, MW-6-22, MW-7-22, MW-8-22, or MW-9-22

SR 520 Bridge Replacement and HOV Program  
 I-5 to Montlake - I/C and Bridge Replacement  
 Groundwater Monitoring Report - Quarter No. 5

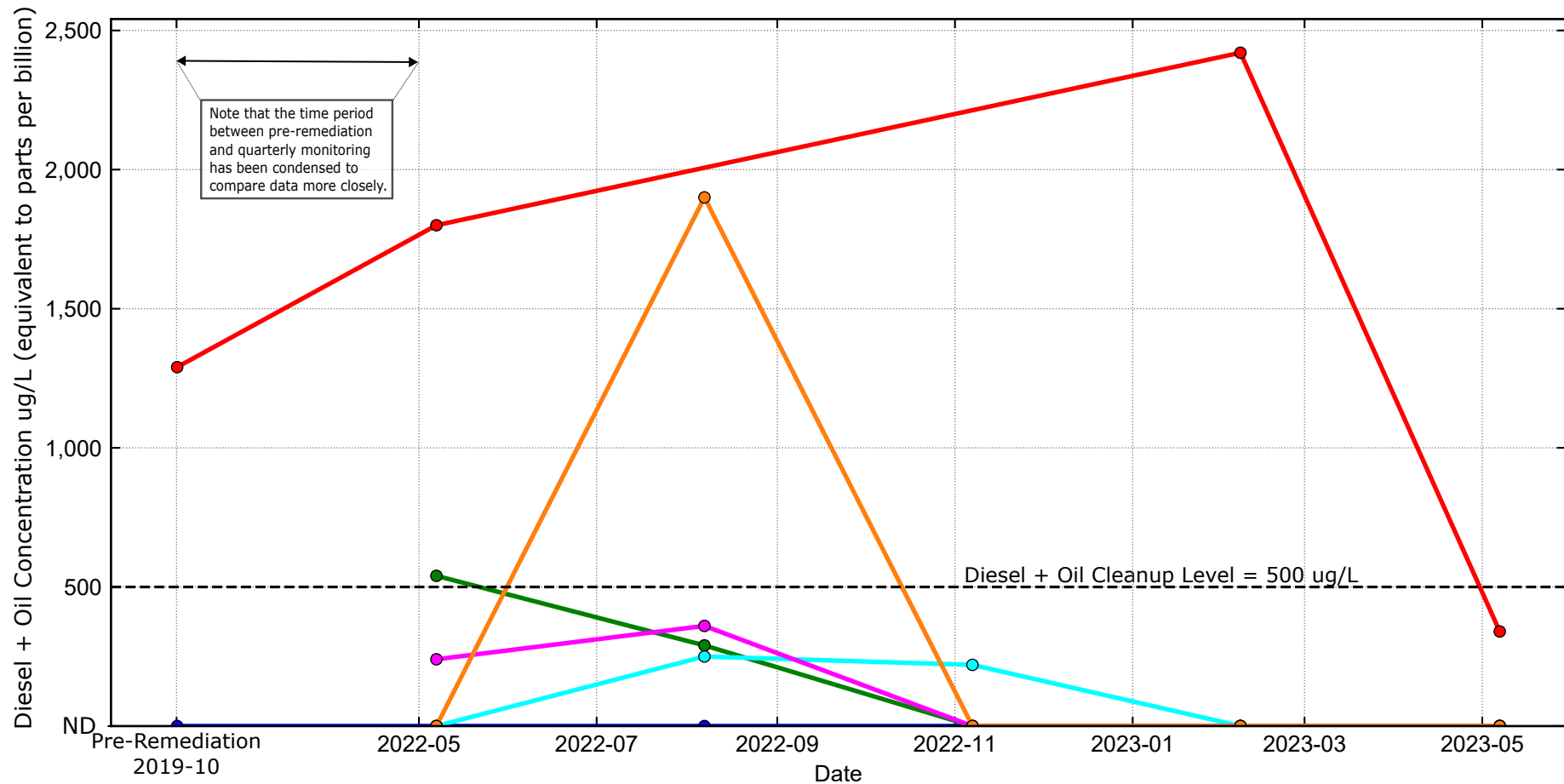
### Groundwater Concentration Trend Plots - Gasoline

June 2023

21-1-22242-104

**SHANNON & WILSON, INC.**  
 Geotechnical and Environmental Consultants

**FIG. 4**



**FIG. 5**

Note: Diesel-range concentrations not detected (ND) in MW-3-19 during Q5 (plot is of lube oil-range only)

SR 520 Bridge Replacement and HOV Program  
I-5 to Montlake - I/C and Bridge Replacement  
Groundwater Monitoring Report - Quarter No. 5

### Groundwater Concentration Trend Plot - Diesel Plus Oil

June 2023

21-1-22242-104

**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

**FIG. 5**

## Attachment 1

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### **Contents:**

Groundwater Sampling Field Forms (9 Sheets)





Project:

Mounlake Gas Station

JOB NO.: 21-1-22242- 112

Conducted by: MRH

Weather: Sunny, Mid 60s

## WATER LEVEL MEASUREMENTS

[illegible]

Comments:

Checked By:

Date:

OWNER / LOCATION: Former Montlake Gas Station  
WELL NO: MW-2-19 SAMPLE NO: MW-2-19-051723 ECOLOGY TAG NO: BLT 996  
WEATHER: Sunny, Mid 60s  
WELL SITE CONDITIONS / MP DEFINITION: N TOC  
(MP is typically the north PVC rim)

DATE: 5/17/2023  
DUPLICATE NO: \_\_\_\_\_  
MS / MSD? Yes ☐ No ☐

## SAMPLING DATA

TIME STARTED: 0844  
PID HEAD SPACE: 0.0 ppm  
MP DISTANCE ABOVE / BELOW GROUND SURFACE: 0.9 ft.  
TOTAL DEPTH OF WELL BELOW MP: 19.26 ft.  
DTW BELOW MP: 8.55 ft.  
WATER COLUMN IN WELL: 10.71 ft.  
CASING DIAMETER: 2 in.  
GALLONS PER FOOT: 0.46  
GALLONS IN WELL: 1.71  
TIME PURGING STARTED: 0850

LINAPL THICKNESS: \_\_\_\_\_ ft. Sample ☐  
DNAPL THICKNESS: \_\_\_\_\_ ft. Sample ☐

## SAMPLE CONTAINERS

| Number | Size  | Type  | Pres. |
|--------|-------|-------|-------|
| _____  | _____ | _____ | _____ |
| _____  | _____ | _____ | _____ |
| _____  | _____ | _____ | _____ |
| _____  | _____ | _____ | _____ |
| _____  | _____ | _____ | _____ |
| _____  | _____ | _____ | _____ |
| _____  | _____ | _____ | _____ |
| _____  | _____ | _____ | _____ |
| _____  | _____ | _____ | _____ |

## FIELD PARAMETERS

| GALLONS REMOVED | TEMP. (C) | ORP (mV) | pH   | COND. (umhos/cm) | D.O. (mg/L) | TURBIDITY (NTU) | SALINITY (‰) | TDS (g/L) | COLOR | TIME |
|-----------------|-----------|----------|------|------------------|-------------|-----------------|--------------|-----------|-------|------|
| Initial         | 14.81     | 164.1    | 6.47 | 663.53           | 1.10        | 26.86           | 0.33         | 0.43      | Clear | 0854 |
| 0.5             | 14.24     | 153.9    | 6.42 | 661.58           | 0.34        | 17.33           | 0.32         | 0.43      | clear | 0857 |
| 0.7             | 14.14     | 157.9    | 6.19 | 674.76           | 0.23        | 12.72           | 0.33         | 0.44      | clear | 0900 |
| 0.8             | 14.03     | 152.9    | 6.15 | 684.09           | 0.19        | 13.17           | 0.33         | 0.44      | clear | 0904 |
| 1.25            | 13.79     | 143.4    | 6.14 | 689.34           | 0.13        | 6.80            | 0.34         | 0.45      | clear | 0907 |
| 1.5             | 13.80     | 140.2    | 6.14 | 697.27           | 0.12        | 7.81            | 0.34         | 0.45      | clear | 0910 |
| 1.8             | 13.78     | 135.4    | 6.15 | 698.03           | 0.09        | 5.02            | 0.34         | 0.45      | clear | 0913 |
| 2.3             | 13.75     | 130.7    | 6.17 | 698.88           | 0.07        | 4.55            | 0.34         | 0.45      | clear | 0916 |
| 2.6             | 13.89     | 125.0    | 6.19 | 702.39           | 0.05        | 5.01            | 0.35         | 0.46      | clear | 0920 |
| After Sampling  | 13.91     | 121.8    | 6.21 | 700.63           | 0.04        | 4.63            | 0.34         | 0.46      | clear | 0925 |

EVACUATION METHOD: Peristaltic Pump  
PUMP INTAKE DEPTH (if applicable): Mid-Screen  
PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
WATER QUALITY (e.g., sheen, odor): No odor or sheen  
WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: Aqua Trill 500 ; 5/17/23 @ 0700  
SAMPLING METHOD: EPA Low Flow  
SAMPLING PERSONNEL: MRN  
REMARKS (e.g., recovery rate):  
SAMPLE TIME: 0950  
DUPLICATE "TIME": \_\_\_\_\_

TIME COMPLETED: 1005

## WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46



OWNER / LOCATION: Former Montlake Gas Station  
WELL NO: MW-3-19 SAMPLE NO: MW-3-19-051723 ECOLOGY TAG NO: BLT 987  
WEATHER: Sunny, Low  
WELL SITE CONDITIONS / MP DEFINITION: N TO C  
(MP is typically the north PVC rim)

DATE: 5/17/2023  
DUPLICATE NO: —  
MS / MSD? Yes ☐ No ☐

## SAMPLING DATA

TIME STARTED: 1430  
PID HEAD SPACE: 25.07 ppm  
MP DISTANCE ABOVE / BELOW GROUND SURFACE: ft.  
TOTAL DEPTH OF WELL BELOW MP: 24.79 ft.  
DTW BELOW MP: 17.42 ft.  
WATER COLUMN IN WELL: 7.37 ft.  
CASING DIAMETER: 2 in.  
GALLONS PER FOOT: 0.16  
GALLONS IN WELL: 1.18  
TIME PURGING STARTED: 1440

LNA PL THICKNESS: ft. Sample ☐  
DNA PL THICKNESS: ft. Sample ☐

| SAMPLE CONTAINERS |      |      |       |
|-------------------|------|------|-------|
| Number            | Size | Type | Pres. |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |

## FIELD PARAMETERS

| GALLONS REMOVED | TEMP. (C°) | Eh (mV) | pH   | COND. (µmhos/cm) | D.O. (mg/L) | TURBIDITY (NTU) | SALINITY (‰) | TDS (g/L) | COLOR | TIME |
|-----------------|------------|---------|------|------------------|-------------|-----------------|--------------|-----------|-------|------|
| Initial         |            |         |      |                  |             |                 |              |           |       |      |
| 1.75            | 16.03      | -97.8   | 7.09 | 1,377.5          | 0.00        | 5.42            | 0.70         | 0.90      | clear | 1505 |
| 2.0             | 16.06      | -99.1   | 7.09 | 1,378.3          | 0.00        | 4.57            | 0.70         | 0.90      | clear | 1508 |
| 2.25            | 16.09      | -101.2  | 7.09 | 1,377.4          | 0.00        | 4.91            | 0.70         | 0.90      | clear | 1511 |
|                 |            |         |      |                  |             |                 |              |           |       |      |
|                 |            |         |      |                  |             |                 |              |           |       |      |
|                 |            |         |      |                  |             |                 |              |           |       |      |
|                 |            |         |      |                  |             |                 |              |           |       |      |
| After Sampling  |            |         |      |                  |             |                 |              |           |       |      |

EVACUATION METHOD: Peristaltic Pump  
PUMP INTAKE DEPTH (if applicable): Mid-screen  
PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
WATER QUALITY (e.g., sheen, odor): Slight petroleum odor & sheen  
WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: Aqua Troll 500; 5/17/2023 @ 0700  
SAMPLING METHOD: EPA Low Flow SAMPLE TIME: 1515  
SAMPLING PERSONNEL: M.R.H. DUPLICATE TIME: —  
REMARKS (e.g., recovery rate): Slow to get initial reading... aqua troll required update

TIME COMPLETED: 1540

## WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46



# WATER SAMPLING LOG

JOB NO. 21-1-22242-112  
PAGE 1 OF 1

OWNER / LOCATION: Former Monlake Gas Station  
WELL NO: MW-6-22 SAMPLE NO: MW-6-22-051723 ECOLOGY TAG NO: BNV 407  
WEATHER: Sunny, Low 70s  
WELL SITE CONDITIONS / MP DEFINITION: NTOC  
(MP is typically the north PVC rim)

DATE: 5/17/2023  
DUPLICATE NO: \_\_\_\_\_  
MS / MSD? Yes ☐ No ☐

## SAMPLING DATA

TIME STARTED: 1240  
PID HEAD SPACE: 0.0 ppm  
MP DISTANCE ABOVE / BELOW GROUND SURFACE: 0.35 ft  
TOTAL DEPTH OF WELL BELOW MP: 25.98 ft  
DTW BELOW MP: 12.99 ft  
WATER COLUMN IN WELL: 12.99 ft  
CASING DIAMETER: 2 in.  
GALLONS PER FOOT: 0.16  
GALLONS IN WELL: 2.08  
TIME PURGING STARTED: 1241

LNAPL THICKNESS: \_\_\_\_\_ ft. Sample ☐  
DNAPL THICKNESS: \_\_\_\_\_ ft. Sample ☐

| SAMPLE CONTAINERS |      |      |       |
|-------------------|------|------|-------|
| Number            | Size | Type | Pres. |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |

## FIELD PARAMETERS

| GALLONS REMOVED | TEMP. (C°) | ORP (mV) | pH   | COND. (umhos/cm) | D.O. (mg/L) | TURBIDITY (NTU) | SALINITY (‰) | TDS (g/L) | COLOR | TIME |
|-----------------|------------|----------|------|------------------|-------------|-----------------|--------------|-----------|-------|------|
| Initial         | 15.87      | 92.7     | 7.11 | 725.61           | 1.06        | 15.96           | 0.36         | 0.47      | clear | 1243 |
| 0.5             | 15.30      | 97.8     | 7.06 | 728.91           | 0.53        | 19.27           | 0.36         | 0.47      | clear | 1246 |
| 0.75            | 15.22      | 96.0     | 7.05 | 725.05           | 0.48        | 22.99           | 0.36         | 0.47      | clear | 1249 |
| 1.0             | 15.17      | 46.2     | 7.12 | 728.12           | 0.44        | 15.76           | 0.36         | 0.47      | clear | 1252 |
| 1.25            | 15.13      | 44.1     | 7.13 | 731.23           | 0.41        | 11.20           | 0.36         | 0.47      | clear | 1256 |
| 1.5             | 15.16      | 41.8     | 7.12 | 731.99           | 0.36        | 11.10           | 0.36         | 0.47      | clear | 1259 |
| 1.75            | 15.15      | 38.9     | 7.11 | 732.42           | 0.34        | 11.83           | 0.36         | 0.47      | clear | 1302 |
|                 |            |          |      |                  |             |                 |              |           |       |      |
|                 |            |          |      |                  |             |                 |              |           |       |      |
| After Sampling  |            |          |      |                  |             |                 |              |           |       |      |

EVACUATION METHOD: Peristaltic Pump  
PUMP INTAKE DEPTH (if applicable): Mid-Screen  
PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
WATER QUALITY (e.g., sheen, odor): No odor or sheen  
WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: Aqua Troll 500; 5/17/23 00700  
SAMPLING METHOD: EPA Low Flow  
SAMPLING PERSONNEL: M.R.H.  
REMARKS (e.g., recovery rate):  
SAMPLE TIME: 1310  
DUPLICATE TIME: \_\_\_\_\_

TIME COMPLETED: 1325

## WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

OWNER / LOCATION: Former Mantra Gas Station DATE: 5/17/2023  
WELL NO: MW-722 SAMPLE NO: MW-722-051723 ECOLOGY TAG NO: BNV 408  
WEATHER: Sunny, Mid 60s MS / MSD? Yes ☐ No ☐  
WELL SITE CONDITIONS / MP DEFINITION: NTC  
(MP is typically the north PVC rim)

## SAMPLING DATA

TIME STARTED: 1005 LNAPL THICKNESS: ft. Sample ☐  
PID HEAD SPACE: 0.0 ppm DNAPL THICKNESS: ft. Sample ☐  
MP DISTANCE ABOVE / BELOW GROUND SURFACE: 0.5 ft.  
TOTAL DEPTH OF WELL BELOW MP: 25.37 ft.  
DTW BELOW MP: 12.84 ft.  
WATER COLUMN IN WELL: 12.53 ft.  
CASING DIAMETER: 2 in.  
GALLONS PER FOOT: 0.16  
GALLONS IN WELL: 2.01  
TIME PURGING STARTED: 1010

| SAMPLE CONTAINERS |      |      |       |
|-------------------|------|------|-------|
| Number            | Size | Type | Pres. |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |

## FIELD PARAMETERS

| GALLONS REMOVED | TEMP. (C°) | PH    | COND. (umhos/cm) | D.O. (mg/L) | TURBIDITY (NTU) | SALINITY (‰ PPT) | TDS (g/L) | COLOR | TIME  |      |
|-----------------|------------|-------|------------------|-------------|-----------------|------------------|-----------|-------|-------|------|
| Initial         | 14.88      | 105.3 | 7.08             | 750.89      | 4.36            | 61.92            | 0.37      | 0.49  | clear | 1013 |
| 0.25            | 14.32      | 102.4 | 7.10             | 754.81      | 3.43            | 40.55            | 0.37      | 0.49  | clear | 1016 |
| 0.6             | 14.15      | 112.5 | 7.04             | 754.15      | 3.24            | 43.16            | 0.37      | 0.49  | clear | 1019 |
| 1.5             | 14.12      | 110.3 | 7.03             | 730.25      | 2.06            | 48.73            | 0.36      | 0.47  | clear | 1027 |
| 2.0             | 14.09      | 106.0 | 7.04             | 721.24      | 1.77            | 38.88            | 0.35      | 0.47  | clear | 1030 |
| 2.5             | 14.06      | 99.9  | 7.06             | 720.09      | 1.40            | 35.60            | 0.35      | 0.47  | clear | 1035 |
| 3.25            | 14.51      | 92.8  | 7.09             | 715.64      | 1.98            | 24.34            | 0.35      | 0.46  | clear | 1043 |
| 3.6             | 14.37      | 91.9  | 7.09             | 710.08      | 1.15            | 22.69            | 0.35      | 0.46  | clear | 1047 |
| 4.0             | 14.42      | 91.7  | 7.09             | 709.26      | 1.21            | 17.61            | 0.35      | 0.46  | clear | 1050 |
| After Sampling  |            |       | See              | page        | 2               | :                | .         |       |       |      |

EVACUATION METHOD: Peristaltic Pump  
PUMP INTAKE DEPTH (if applicable): Mid-screen  
PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
WATER QUALITY (e.g., sheen, odor):  
WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: Aqua Troll 500; 5/17/23 @ 0700  
SAMPLING METHOD: EPA Low Flow SAMPLE TIME: 1130  
SAMPLING PERSONNEL: MRH DUPLICATE TIME:  
REMARKS (e.g., recovery rate):

TIME COMPLETED: 1140

## WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

OWNER / LOCATION: Former Montlake Gas Station DATE: 5/17/2023  
WELL NO: MW-7-22 SAMPLE NO: ECOLOGY TAG NO: BNV-408 DUPLICATE NO:  
WEATHER: MS / MSD? Yes ☐ No ☐  
WELL SITE CONDITIONS / MP DEFINITION: (MP is typically the north PVC rim)

## SAMPLING DATA

TIME STARTED: LNAPL THICKNESS: ft. Sample ☐  
PID HEAD SPACE: ppm DNAPL THICKNESS: ft. Sample ☐  
MP DISTANCE ABOVE / BELOW GROUND SURFACE: ft.  
TOTAL DEPTH OF WELL BELOW MP: ft. Number Size Type Pres.  
DTW BELOW MP: ft.  
WATER COLUMN IN WELL: ft.  
CASING DIAMETER: in.  
GALLONS PER FOOT:  
GALLONS IN WELL:  
TIME PURGING STARTED:

## FIELD PARAMETERS

| GALLONS REMOVED | TEMP. (C°) | Eh (mV) | pH   | COND. (µmhos/cm) | D.O. (mg/L) | TURBIDITY (NTU) | SALINITY (‰) | TDS (g/L) | COLOR | TIME |
|-----------------|------------|---------|------|------------------|-------------|-----------------|--------------|-----------|-------|------|
| 4.5             | 14.74      | 90.2    | 7.09 | 710.03           | 0.88        | 22.47           | 0.34         | 0.45      | clear | 1055 |
| 5.0             | 14.76      | 90.5    | 7.10 | 707.25           | 0.85        | 20.11           | 0.34         | 0.45      | clear | 1100 |
| 5.25            | 14.76      | 87.6    | 7.11 | 705.63           | 0.72        | 16.72           | 0.34         | 0.45      | clear | 1105 |
| 5.5             | 14.78      | 83.2    | 7.12 | 703.21           | 0.66        | 14.10           | 0.34         | 0.45      | clear | 1110 |
| 6.0             | 14.77      | 82.8    | 7.12 | 704.41           | 0.64        | 14.52           | 0.34         | 0.45      | clear | 1115 |
| 6.5             | 14.76      | 82.9    | 7.12 | 704.22           | 0.61        | 14.03           | 0.34         | 0.45      | clear | 1120 |
| After Sampling  |            |         |      |                  |             |                 |              |           |       |      |

EVACUATION METHOD:  
PUMP INTAKE DEPTH (if applicable):  
PURGE WATER DISPOSITION (e.g., drum #):  
WATER QUALITY (e.g., sheen, odor):  
WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME:  
SAMPLING METHOD: SAMPLE TIME 1130  
SAMPLING PERSONNEL: DUPLICATE TIME:  
REMARKS (e.g., recovery rate):

TIME COMPLETED: 1140

## WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

OWNER / LOCATION: Former Montlake Gas Station  
WELL NO: MW-8-22 SAMPLE NO: MW-8-22:051723 ECOLOGY TAG NO: BNV 406  
WEATHER: Sunny, High 60s  
WELL SITE CONDITIONS / MP DEFINITION: N TO V  
(MP is typically the north PVC rim)

DATE: 5/17/2023  
DUPLICATE NO: MW-100:051723  
MS / MSD? Yes ☐ No ☐

## SAMPLING DATA

TIME STARTED: 1145  
PID HEAD SPACE: 0.0 ppm  
MP DISTANCE ABOVE / BELOW GROUND SURFACE: 0.3 ft  
TOTAL DEPTH OF WELL BELOW MP: 26.05 ft  
DTW BELOW MP: 12.05 ft  
WATER COLUMN IN WELL: 14 ft  
CASING DIAMETER: 2 in.  
GALLONS PER FOOT: 0.16  
GALLONS IN WELL: 2.24  
TIME PURGING STARTED: 1145

LNAPL THICKNESS: ft. Sample ☐  
DNAPL THICKNESS: ft. Sample ☐

| SAMPLE CONTAINERS |      |      |       |
|-------------------|------|------|-------|
| Number            | Size | Type | Pres. |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |
|                   |      |      |       |

## FIELD PARAMETERS

| GALLONS REMOVED | TEMP. (C) | ORP (mV) | pH   | COND. (umhos/cm) | D.O. (mg/L) | TURBIDITY (NTU) | SALINITY (‰ PS) | TDS (g/L) | COLOR | TIME |
|-----------------|-----------|----------|------|------------------|-------------|-----------------|-----------------|-----------|-------|------|
| Initial         | 14.04     | 91.4     | 7.09 | 730.54           | 0.23        | 56.23           | 0.36            | 0.48      | clear | 1147 |
| 0.5             | 14.51     | 85.2     | 7.11 | 730.55           | 0.01        | 36.63           | 0.36            | 0.48      | clear | 1150 |
| 0.9             | 14.42     | 79.8     | 7.11 | 724.51           | 0.00        | 42.88           | 0.36            | 0.47      | clear | 1153 |
| 1.25            | 14.53     | 71.8     | 7.12 | 720.21           | 0.00        | 41.99           | 0.36            | 0.47      | clear | 1157 |
| 1.5             | 14.56     | 49.6     | 7.12 | 724.04           | 0.00        | 35.95           | 0.36            | 0.47      | clear | 1201 |
| 1.75            | 14.47     | 52.5     | 7.14 | 724.94           | 0.00        | 32.07           | 0.36            | 0.47      | clear | 1204 |
| 2.25            | 14.45     | 37.5     | 7.14 | 725.04           | 0.00        | 33.40           | 0.36            | 0.47      | clear | 1209 |
| 2.5             | 14.44     | 35.0     | 7.15 | 723.03           | 0.00        | 34.53           | 0.36            | 0.47      | clear | 1212 |
| 2.75            | 14.43     | 33.1     | 7.15 | 727.07           | 0.00        | 34.02           | 0.36            | 0.47      | clear | 1215 |
| After Sampling  |           |          |      |                  |             |                 |                 |           |       |      |

EVACUATION METHOD: Peristaltic Pump  
PUMP INTAKE DEPTH (if applicable): Mid-Screen  
PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
WATER QUALITY (e.g., sheen, odor): No odor or sheen  
WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: Aqua Troll 500, 5/17 @ 0700  
SAMPLING METHOD: EPA Low Flow SAMPLE TIME: 1220  
SAMPLING PERSONNEL: MKH DUPLICATE TIME: 1700  
REMARKS (e.g., recovery rate): MW-100:051723 = duplicate

TIME COMPLETED: 1230

## WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46



OWNER / LOCATION: Former Montlake gas station  
WELL NO: MW-9-22 SAMPLE NO: MW-9-22-051723 ECOLOGY TAG NO: BNV-409  
WEATHER: Sunny, Low 70s  
WELL SITE CONDITIONS / MP DEFINITION: N TOC  
(MP is typically the north PVC rim)

DATE: 5/17/2023  
DUPLICATE NO: —  
MS / MSD? Yes ☐ No ☐

## SAMPLING DATA

TIME STARTED: 1325  
PID HEAD SPACE: 0.0 ppm  
MP DISTANCE ABOVE / BELOW GROUND SURFACE: — ft.  
TOTAL DEPTH OF WELL BELOW MP: 25.15 ft.  
DTW BELOW MP: 13.14 ft.  
WATER COLUMN IN WELL: 12.01 ft.  
CASING DIAMETER: 2 in.  
GALLONS PER FOOT: 0.16  
GALLONS IN WELL: 1.92  
TIME PURGING STARTED: 1326

LNAFL THICKNESS: — ft. Sample ☐  
DNAFL THICKNESS: — ft. Sample ☐

| SAMPLE CONTAINERS |      |      |       |
|-------------------|------|------|-------|
| Number            | Size | Type | Pres. |
| —                 | —    | —    | —     |
| —                 | —    | —    | —     |
| —                 | —    | —    | —     |
| —                 | —    | —    | —     |
| —                 | —    | —    | —     |
| —                 | —    | —    | —     |
| —                 | —    | —    | —     |
| —                 | —    | —    | —     |
| —                 | —    | —    | —     |

## FIELD PARAMETERS

| GALLONS REMOVED | TEMP. (C°) | Eh (mV) | pH   | COND. (µmhos / cm) | D.O. (mg / L) | TURBIDITY (NTU) | SALINITY (‰) | TDS (g / L) | COLOR | TIME |
|-----------------|------------|---------|------|--------------------|---------------|-----------------|--------------|-------------|-------|------|
| Initial         | 15.97      | 60.5    | 7.04 | 553.16             | 0.50          | 105.09          | 0.27         | 0.36        | clear | 1328 |
| 0.5             | 15.57      | 57.8    | 7.03 | 555.49             | 0.07          | 79.74           | 0.27         | 0.36        | clear | 1331 |
| 0.75            | 15.41      | 60.1    | 6.84 | 553.38             | 0.01          | 77.04           | 0.27         | 0.36        | clear | 1334 |
| 2.25            | 15.23      | 66.1    | 6.87 | 556.42             | 0.00          | 27.83           | 0.27         | 0.36        | clear | 1350 |
| 2.5             | 15.24      | 62.0    | 6.99 | 555.12             | 0.00          | 15.21           | 0.27         | 0.36        | clear | 1353 |
| 2.75            | 15.26      | 58.7    | 7.01 | 556.72             | 0.00          | 10.01           | 0.27         | 0.36        | clear | 1356 |
| 3.0             | 15.29      | 59.1    | 7.02 | 554.13             | 0.00          | 9.76            | 0.27         | 0.36        | clear | 1359 |
| 3.25            | 15.20      | 58.6    | 7.02 | 555.29             | 0.00          | 8.52            | 0.27         | 0.36        | clear | 1402 |
| After Sampling  |            |         |      |                    |               |                 |              |             |       |      |

EVACUATION METHOD: Peristaltic Pump  
PUMP INTAKE DEPTH (if applicable): Mid-Screen  
PURGE WATER DISPOSITION (e.g., drum #): Drum on site  
WATER QUALITY (e.g., sheen, odor): No odor or sheen  
WATER QUALITY METER(S) USED; CALIBRATION DATE / TIME: Aqua Troll 500; 5/17 @ 0700  
SAMPLING METHOD: EPA Low Flow  
SAMPLING PERSONNEL: MKH  
REMARKS (e.g., recovery rate):

SAMPLE TIME: 1410  
DUPLICATE "TIME": —

TIME COMPLETED: 1430

## WELL CASING VOLUMES

Gal / ft 1-1/4" = 0.077 2" = 0.16 3" = 0.37 4" = 0.65  
1-1/2" = 0.10 2-1/2" = 0.24 3-1/2" = 0.50 6" = 1.46

## Attachment 2

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### Contents:

Laboratory Report and Chain-of-Custody Form (17 Sheets)



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

May 31, 2023

Joseph Sawdey  
Shannon & Wilson, Inc.  
400 N 34th Street, Suite 100  
Seattle, WA 98103

Re: Analytical Data for Project 21-1-22247-112  
Laboratory Reference No. 2305-214

Dear Joseph:

Enclosed are the analytical results and associated quality control data for samples submitted on May 18, 2023.

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,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 31, 2023  
Samples Submitted: May 18, 2023  
Laboratory Reference: 2305-214  
Project: 21-1-22247-112

### Case Narrative

Samples were collected on May 17, 2023 and received by the laboratory on May 18, 2023. 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: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

**GASOLINE RANGE ORGANICS**  
**NWTPH-Gx**

Matrix: Water  
 Units: ug/L (ppb)

| Analyte           | Result                | PQL            | Method   | Date Prepared | Date Analyzed | Flags |
|-------------------|-----------------------|----------------|----------|---------------|---------------|-------|
| <b>Client ID:</b> | <b>MW-2-19:051723</b> |                |          |               |               |       |
| Laboratory ID:    | 05-214-01             |                |          |               |               |       |
| Gasoline          | <b>ND</b>             | 100            | NWTPH-Gx | 5-19-23       | 5-19-23       |       |
| Surrogate:        | Percent Recovery      | Control Limits |          |               |               |       |
| Fluorobenzene     | 73                    | 65-122         |          |               |               |       |
| <b>Client ID:</b> | <b>MW-6-22:051723</b> |                |          |               |               |       |
| Laboratory ID:    | 05-214-02             |                |          |               |               |       |
| Gasoline          | <b>ND</b>             | 100            | NWTPH-Gx | 5-19-23       | 5-19-23       |       |
| Surrogate:        | Percent Recovery      | Control Limits |          |               |               |       |
| Fluorobenzene     | 75                    | 65-122         |          |               |               |       |
| <b>Client ID:</b> | <b>MW-7-22:051723</b> |                |          |               |               |       |
| Laboratory ID:    | 05-214-03             |                |          |               |               |       |
| Gasoline          | <b>ND</b>             | 100            | NWTPH-Gx | 5-19-23       | 5-19-23       |       |
| Surrogate:        | Percent Recovery      | Control Limits |          |               |               |       |
| Fluorobenzene     | 75                    | 65-122         |          |               |               |       |
| <b>Client ID:</b> | <b>MW-8-22:051723</b> |                |          |               |               |       |
| Laboratory ID:    | 05-214-04             |                |          |               |               |       |
| Gasoline          | <b>ND</b>             | 100            | NWTPH-Gx | 5-19-23       | 5-19-23       |       |
| Surrogate:        | Percent Recovery      | Control Limits |          |               |               |       |
| Fluorobenzene     | 72                    | 65-122         |          |               |               |       |
| <b>Client ID:</b> | <b>MW-9-22:051723</b> |                |          |               |               |       |
| Laboratory ID:    | 05-214-05             |                |          |               |               |       |
| Gasoline          | <b>ND</b>             | 100            | NWTPH-Gx | 5-19-23       | 5-19-23       |       |
| Surrogate:        | Percent Recovery      | Control Limits |          |               |               |       |
| Fluorobenzene     | 74                    | 65-122         |          |               |               |       |
| <b>Client ID:</b> | <b>MW-100:051723</b>  |                |          |               |               |       |
| Laboratory ID:    | 05-214-06             |                |          |               |               |       |
| Gasoline          | <b>ND</b>             | 100            | NWTPH-Gx | 5-19-23       | 5-19-23       |       |
| Surrogate:        | Percent Recovery      | Control Limits |          |               |               |       |
| Fluorobenzene     | 74                    | 65-122         |          |               |               |       |
| <b>Client ID:</b> | <b>MW-3-19:051723</b> |                |          |               |               |       |
| Laboratory ID:    | 05-214-07             |                |          |               |               |       |
| Gasoline          | <b>8400</b>           | 100            | NWTPH-Gx | 5-19-23       | 5-19-23       |       |
| Surrogate:        | Percent Recovery      | Control Limits |          |               |               |       |
| Fluorobenzene     | 90                    | 65-122         |          |               |               |       |



Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

**GASOLINE RANGE ORGANICS  
 NWTPH-Gx  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

| Analyte             | Result           | PQL            | Method   | Date Prepared | Date Analyzed | Flags |
|---------------------|------------------|----------------|----------|---------------|---------------|-------|
| <b>METHOD BLANK</b> |                  |                |          |               |               |       |
| Laboratory ID:      | MB0519W5         |                |          |               |               |       |
| Gasoline            | <b>ND</b>        | 100            | NWTPH-Gx | 5-19-23       | 5-19-23       |       |
| Surrogate:          | Percent Recovery | Control Limits |          |               |               |       |
| Fluorobenzene       | 76               | 65-122         |          |               |               |       |

| Analyte          | Result    | Spike Level | Source Result | Percent Recovery | Recovery Limits | RPD    | RPD Limit | Flags |
|------------------|-----------|-------------|---------------|------------------|-----------------|--------|-----------|-------|
| <b>DUPLICATE</b> |           |             |               |                  |                 |        |           |       |
| Laboratory ID:   | 05-213-04 |             |               |                  |                 |        |           |       |
|                  | ORIG      | DUP         |               |                  |                 |        |           |       |
| Gasoline         | <b>ND</b> | <b>ND</b>   | NA            | NA               | NA              | NA     | 30        |       |
| Surrogate:       |           |             |               |                  |                 |        |           |       |
| Fluorobenzene    |           |             |               | 77               | 67              | 65-122 |           |       |



Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

| Analyte                          | Result                  | PQL                   | Method    | Date Prepared | Date Analyzed | Flags |
|----------------------------------|-------------------------|-----------------------|-----------|---------------|---------------|-------|
| <b>Client ID: MW-2-19:051723</b> |                         |                       |           |               |               |       |
| Laboratory ID: 05-214-01         |                         |                       |           |               |               |       |
| Benzene                          | ND                      | 0.20                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| Toluene                          | ND                      | 1.0                   | EPA 8260D | 5-23-23       | 5-23-23       |       |
| Ethylbenzene                     | ND                      | 0.20                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| m,p-Xylene                       | ND                      | 0.40                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| o-Xylene                         | ND                      | 0.20                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| <i>Surrogate:</i>                | <i>Percent Recovery</i> | <i>Control Limits</i> |           |               |               |       |
| <i>Dibromofluoromethane</i>      | <i>122</i>              | <i>75-127</i>         |           |               |               |       |
| <i>Toluene-d8</i>                | <i>120</i>              | <i>80-127</i>         |           |               |               |       |
| <i>4-Bromofluorobenzene</i>      | <i>81</i>               | <i>78-125</i>         |           |               |               |       |

|                                  |                         |                       |           |         |         |  |
|----------------------------------|-------------------------|-----------------------|-----------|---------|---------|--|
| <b>Client ID: MW-6-22:051723</b> |                         |                       |           |         |         |  |
| Laboratory ID: 05-214-02         |                         |                       |           |         |         |  |
| Benzene                          | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| Toluene                          | ND                      | 1.0                   | EPA 8260D | 5-23-23 | 5-23-23 |  |
| Ethylbenzene                     | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| m,p-Xylene                       | ND                      | 0.40                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| o-Xylene                         | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| <i>Surrogate:</i>                | <i>Percent Recovery</i> | <i>Control Limits</i> |           |         |         |  |
| <i>Dibromofluoromethane</i>      | <i>126</i>              | <i>75-127</i>         |           |         |         |  |
| <i>Toluene-d8</i>                | <i>119</i>              | <i>80-127</i>         |           |         |         |  |
| <i>4-Bromofluorobenzene</i>      | <i>82</i>               | <i>78-125</i>         |           |         |         |  |

|                                  |                         |                       |           |         |         |  |
|----------------------------------|-------------------------|-----------------------|-----------|---------|---------|--|
| <b>Client ID: MW-7-22:051723</b> |                         |                       |           |         |         |  |
| Laboratory ID: 05-214-03         |                         |                       |           |         |         |  |
| Benzene                          | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| Toluene                          | ND                      | 1.0                   | EPA 8260D | 5-23-23 | 5-23-23 |  |
| Ethylbenzene                     | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| m,p-Xylene                       | ND                      | 0.40                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| o-Xylene                         | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| <i>Surrogate:</i>                | <i>Percent Recovery</i> | <i>Control Limits</i> |           |         |         |  |
| <i>Dibromofluoromethane</i>      | <i>122</i>              | <i>75-127</i>         |           |         |         |  |
| <i>Toluene-d8</i>                | <i>118</i>              | <i>80-127</i>         |           |         |         |  |
| <i>4-Bromofluorobenzene</i>      | <i>80</i>               | <i>78-125</i>         |           |         |         |  |



Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

### VOLATILE ORGANICS EPA 8260D

Matrix: Water  
 Units: ug/L

| Analyte                          | Result                  | PQL                   | Method    | Date Prepared | Date Analyzed | Flags |
|----------------------------------|-------------------------|-----------------------|-----------|---------------|---------------|-------|
| <b>Client ID: MW-8-22:051723</b> |                         |                       |           |               |               |       |
| Laboratory ID: 05-214-04         |                         |                       |           |               |               |       |
| Benzene                          | ND                      | 0.20                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| Toluene                          | ND                      | 1.0                   | EPA 8260D | 5-23-23       | 5-23-23       |       |
| Ethylbenzene                     | ND                      | 0.20                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| m,p-Xylene                       | ND                      | 0.40                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| o-Xylene                         | ND                      | 0.20                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| <i>Surrogate:</i>                | <i>Percent Recovery</i> | <i>Control Limits</i> |           |               |               |       |
| <i>Dibromofluoromethane</i>      | <i>124</i>              | <i>75-127</i>         |           |               |               |       |
| <i>Toluene-d8</i>                | <i>119</i>              | <i>80-127</i>         |           |               |               |       |
| <i>4-Bromofluorobenzene</i>      | <i>83</i>               | <i>78-125</i>         |           |               |               |       |

|                                  |                         |                       |           |         |         |  |
|----------------------------------|-------------------------|-----------------------|-----------|---------|---------|--|
| <b>Client ID: MW-9-22:051723</b> |                         |                       |           |         |         |  |
| Laboratory ID: 05-214-05         |                         |                       |           |         |         |  |
| Benzene                          | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| Toluene                          | ND                      | 1.0                   | EPA 8260D | 5-23-23 | 5-23-23 |  |
| Ethylbenzene                     | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| m,p-Xylene                       | ND                      | 0.40                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| o-Xylene                         | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| <i>Surrogate:</i>                | <i>Percent Recovery</i> | <i>Control Limits</i> |           |         |         |  |
| <i>Dibromofluoromethane</i>      | <i>124</i>              | <i>75-127</i>         |           |         |         |  |
| <i>Toluene-d8</i>                | <i>118</i>              | <i>80-127</i>         |           |         |         |  |
| <i>4-Bromofluorobenzene</i>      | <i>83</i>               | <i>78-125</i>         |           |         |         |  |

|                                 |                         |                       |           |         |         |  |
|---------------------------------|-------------------------|-----------------------|-----------|---------|---------|--|
| <b>Client ID: MW-100:051723</b> |                         |                       |           |         |         |  |
| Laboratory ID: 05-214-06        |                         |                       |           |         |         |  |
| Benzene                         | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| Toluene                         | ND                      | 1.0                   | EPA 8260D | 5-23-23 | 5-23-23 |  |
| Ethylbenzene                    | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| m,p-Xylene                      | ND                      | 0.40                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| o-Xylene                        | ND                      | 0.20                  | EPA 8260D | 5-23-23 | 5-23-23 |  |
| <i>Surrogate:</i>               | <i>Percent Recovery</i> | <i>Control Limits</i> |           |         |         |  |
| <i>Dibromofluoromethane</i>     | <i>122</i>              | <i>75-127</i>         |           |         |         |  |
| <i>Toluene-d8</i>               | <i>119</i>              | <i>80-127</i>         |           |         |         |  |
| <i>4-Bromofluorobenzene</i>     | <i>81</i>               | <i>78-125</i>         |           |         |         |  |



Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

# **VOLATILE ORGANICS EPA 8260D**

Matrix: Water  
 Units: ug/L

| Analyte                     | Result                  | PQL                   | Method    | Date Prepared | Date Analyzed | Flags |
|-----------------------------|-------------------------|-----------------------|-----------|---------------|---------------|-------|
| <b>Client ID:</b>           | <b>MW-3-19:051723</b>   |                       |           |               |               |       |
| <b>Laboratory ID:</b>       | <b>05-214-07</b>        |                       |           |               |               |       |
| Benzene                     | 100                     | 4.0                   | EPA 8260D | 5-23-23       | 5-23-23       |       |
| Toluene                     | ND                      | 20                    | EPA 8260D | 5-23-23       | 5-23-23       |       |
| Ethylbenzene                | 79                      | 4.0                   | EPA 8260D | 5-23-23       | 5-23-23       |       |
| m,p-Xylene                  | 120                     | 8.0                   | EPA 8260D | 5-23-23       | 5-23-23       |       |
| o-Xylene                    | ND                      | 4.0                   | EPA 8260D | 5-23-23       | 5-23-23       |       |
| <i>Surrogate:</i>           | <i>Percent Recovery</i> | <i>Control Limits</i> |           |               |               |       |
| <i>Dibromofluoromethane</i> | <i>121</i>              | <i>75-127</i>         |           |               |               |       |
| <i>Toluene-d8</i>           | <i>118</i>              | <i>80-127</i>         |           |               |               |       |
| <i>4-Bromofluorobenzene</i> | <i>84</i>               | <i>78-125</i>         |           |               |               |       |





Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

**VOLATILE ORGANICS EPA 8260D  
 QUALITY CONTROL**

Matrix: Water

Units: ug/L

| Analyte                     | Result                  | PQL                   | Method    | Date Prepared | Date Analyzed | Flags |
|-----------------------------|-------------------------|-----------------------|-----------|---------------|---------------|-------|
| <b>METHOD BLANK</b>         |                         |                       |           |               |               |       |
| Laboratory ID:              | MB0523W1                |                       |           |               |               |       |
| Benzene                     | ND                      | 0.20                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| Toluene                     | ND                      | 1.0                   | EPA 8260D | 5-23-23       | 5-23-23       |       |
| Ethylbenzene                | ND                      | 0.20                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| m,p-Xylene                  | ND                      | 0.40                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| o-Xylene                    | ND                      | 0.20                  | EPA 8260D | 5-23-23       | 5-23-23       |       |
| <i>Surrogate:</i>           | <i>Percent Recovery</i> | <i>Control Limits</i> |           |               |               |       |
| <i>Dibromofluoromethane</i> | 123                     | 75-127                |           |               |               |       |
| <i>Toluene-d8</i>           | 117                     | 80-127                |           |               |               |       |
| <i>4-Bromofluorobenzene</i> | 82                      | 78-125                |           |               |               |       |

| Analyte              | Result    |      | Spike Level |      | Source Result | Percent Recovery |     | Recovery Limits | RPD | RPD Limit | Flags |
|----------------------|-----------|------|-------------|------|---------------|------------------|-----|-----------------|-----|-----------|-------|
| MATRIX SPIKES        |           |      |             |      |               |                  |     |                 |     |           |       |
| Laboratory ID:       | 05-166-01 |      |             |      |               |                  |     |                 |     |           |       |
|                      | MS        | MSD  | MS          | MSD  |               | MS               | MSD |                 |     |           |       |
| Benzene              | 10.1      | 10.1 | 10.0        | 10.0 | ND            | 101              | 101 | 74-128          | 0   | 18        |       |
| Toluene              | 9.79      | 9.62 | 10.0        | 10.0 | ND            | 98               | 96  | 77-121          | 2   | 17        |       |
| Ethylbenzene         | 10.2      | 9.94 | 10.0        | 10.0 | ND            | 102              | 99  | 81-126          | 3   | 20        |       |
| m,p-Xylene           | 20.2      | 19.8 | 20.0        | 20.0 | ND            | 101              | 99  | 81-128          | 2   | 21        |       |
| o-Xylene             | 10.1      | 9.87 | 10.0        | 10.0 | ND            | 101              | 99  | 82-127          | 2   | 20        |       |
| Surrogate:           |           |      |             |      |               |                  |     |                 |     |           |       |
| Dibromofluoromethane |           |      |             |      |               | 121              | 124 | 75-127          |     |           |       |
| Toluene-d8           |           |      |             |      |               | 118              | 117 | 80-127          |     |           |       |
| 4-Bromofluorobenzene |           |      |             |      |               | 84               | 86  | 78-125          |     |           |       |



Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

**DIESEL AND HEAVY OIL RANGE ORGANICS  
 NWTPH-Dx**

Matrix: Water  
 Units: mg/L (ppm)

| Analyte                 | Result                  | PQL                   | Method   | Date Prepared | Date Analyzed | Flags |
|-------------------------|-------------------------|-----------------------|----------|---------------|---------------|-------|
| <b>Client ID:</b>       | <b>MW-2-19:051723</b>   |                       |          |               |               |       |
| Laboratory ID:          | 05-214-01               |                       |          |               |               |       |
| Diesel Range Organics   | <b>ND</b>               | 0.21                  | NWTPH-Dx | 5-25-23       | 5-25-23       |       |
| Lube Oil Range Organics | <b>ND</b>               | 0.21                  | NWTPH-Dx | 5-25-23       | 5-25-23       |       |
| <i>Surrogate:</i>       | <i>Percent Recovery</i> | <i>Control Limits</i> |          |               |               |       |
| <i>o-Terphenyl</i>      | 106                     | 50-150                |          |               |               |       |

|                         |                         |                       |          |         |         |  |
|-------------------------|-------------------------|-----------------------|----------|---------|---------|--|
| <b>Client ID:</b>       | <b>MW-6-22:051723</b>   |                       |          |         |         |  |
| Laboratory ID:          | 05-214-02               |                       |          |         |         |  |
| Diesel Range Organics   | <b>ND</b>               | 0.21                  | NWTPH-Dx | 5-25-23 | 5-25-23 |  |
| Lube Oil Range Organics | <b>ND</b>               | 0.21                  | NWTPH-Dx | 5-25-23 | 5-25-23 |  |
| <i>Surrogate:</i>       | <i>Percent Recovery</i> | <i>Control Limits</i> |          |         |         |  |
| <i>o-Terphenyl</i>      | 92                      | 50-150                |          |         |         |  |

|                         |                         |                       |          |         |         |  |
|-------------------------|-------------------------|-----------------------|----------|---------|---------|--|
| <b>Client ID:</b>       | <b>MW-7-22:051723</b>   |                       |          |         |         |  |
| Laboratory ID:          | 05-214-03               |                       |          |         |         |  |
| Diesel Range Organics   | <b>ND</b>               | 0.21                  | NWTPH-Dx | 5-25-23 | 5-25-23 |  |
| Lube Oil Range Organics | <b>ND</b>               | 0.21                  | NWTPH-Dx | 5-25-23 | 5-25-23 |  |
| <i>Surrogate:</i>       | <i>Percent Recovery</i> | <i>Control Limits</i> |          |         |         |  |
| <i>o-Terphenyl</i>      | 103                     | 50-150                |          |         |         |  |

|                         |                         |                       |          |         |         |  |
|-------------------------|-------------------------|-----------------------|----------|---------|---------|--|
| <b>Client ID:</b>       | <b>MW-8-22:051723</b>   |                       |          |         |         |  |
| Laboratory ID:          | 05-214-04               |                       |          |         |         |  |
| Diesel Range Organics   | <b>ND</b>               | 0.21                  | NWTPH-Dx | 5-25-23 | 5-25-23 |  |
| Lube Oil Range Organics | <b>ND</b>               | 0.21                  | NWTPH-Dx | 5-25-23 | 5-25-23 |  |
| <i>Surrogate:</i>       | <i>Percent Recovery</i> | <i>Control Limits</i> |          |         |         |  |
| <i>o-Terphenyl</i>      | 89                      | 50-150                |          |         |         |  |

|                         |                         |                       |          |         |         |  |
|-------------------------|-------------------------|-----------------------|----------|---------|---------|--|
| <b>Client ID:</b>       | <b>MW-9-22:051723</b>   |                       |          |         |         |  |
| Laboratory ID:          | 05-214-05               |                       |          |         |         |  |
| Diesel Range Organics   | <b>ND</b>               | 0.22                  | NWTPH-Dx | 5-25-23 | 5-25-23 |  |
| Lube Oil Range Organics | <b>ND</b>               | 0.22                  | NWTPH-Dx | 5-25-23 | 5-25-23 |  |
| <i>Surrogate:</i>       | <i>Percent Recovery</i> | <i>Control Limits</i> |          |         |         |  |
| <i>o-Terphenyl</i>      | 98                      | 50-150                |          |         |         |  |

|                         |                         |                       |          |         |         |  |
|-------------------------|-------------------------|-----------------------|----------|---------|---------|--|
| <b>Client ID:</b>       | <b>MW-100:051723</b>    |                       |          |         |         |  |
| Laboratory ID:          | 05-214-06               |                       |          |         |         |  |
| Diesel Range Organics   | <b>ND</b>               | 0.22                  | NWTPH-Dx | 5-25-23 | 5-25-23 |  |
| Lube Oil Range Organics | <b>ND</b>               | 0.22                  | NWTPH-Dx | 5-25-23 | 5-25-23 |  |
| <i>Surrogate:</i>       | <i>Percent Recovery</i> | <i>Control Limits</i> |          |         |         |  |
| <i>o-Terphenyl</i>      | 81                      | 50-150                |          |         |         |  |



Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

**DIESEL AND HEAVY OIL RANGE ORGANICS**  
**NWTPH-Dx**

Matrix: Water  
 Units: mg/L (ppm)

| Analyte                 | Result                  | PQL                   | Method   | Date Prepared | Date Analyzed | Flags |
|-------------------------|-------------------------|-----------------------|----------|---------------|---------------|-------|
| <b>Client ID:</b>       | <b>MW-3-19:051723</b>   |                       |          |               |               |       |
| Laboratory ID:          | 05-214-07               |                       |          |               |               |       |
| Diesel Range Organics   | <b>ND</b>               | 1.7                   | NWTPH-Dx | 5-25-23       | 5-25-23       | M1,U1 |
| Lube Oil Range Organics | <b>0.34</b>             | 0.21                  | NWTPH-Dx | 5-25-23       | 5-25-23       |       |
| <i>Surrogate:</i>       | <i>Percent Recovery</i> | <i>Control Limits</i> |          |               |               |       |
| <i>o-Terphenyl</i>      | 87                      | 50-150                |          |               |               |       |



Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

**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 |
|-------------------------|-------------------------|-----------------------|----------|---------------|---------------|-------|
| <b>METHOD BLANK</b>     |                         |                       |          |               |               |       |
| Laboratory ID:          | MB0525W1                |                       |          |               |               |       |
| Diesel Range Organics   | <b>ND</b>               | 0.16                  | NWTPH-Dx | 5-25-23       | 5-25-23       |       |
| Lube Oil Range Organics | <b>ND</b>               | 0.16                  | NWTPH-Dx | 5-25-23       | 5-25-23       |       |
| <i>Surrogate:</i>       | <i>Percent Recovery</i> | <i>Control Limits</i> |          |               |               |       |
| <i>o-Terphenyl</i>      | 120                     | 50-150                |          |               |               |       |

| Analyte            | Result       | Spike Level  | Source Result | Percent Recovery | Recovery Limits | RPD    | RPD Limit | Flags |
|--------------------|--------------|--------------|---------------|------------------|-----------------|--------|-----------|-------|
| <b>DUPLICATE</b>   |              |              |               |                  |                 |        |           |       |
| Laboratory ID:     | SB0525W1     |              |               |                  |                 |        |           |       |
|                    | ORIG         | DUP          |               |                  |                 |        |           |       |
| Diesel Fuel #2     | <b>0.418</b> | <b>0.354</b> | NA            | NA               | NA              | NA     | 17        | 40    |
| <i>Surrogate:</i>  |              |              |               |                  |                 |        |           |       |
| <i>o-Terphenyl</i> |              |              |               | 102              | 94              | 50-150 |           |       |



Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

**TOTAL ARSENIC**  
**EPA 200.8**

Matrix: Water  
 Units: ug/L (ppb)

| Analyte           | Result                | PQL | Method    | Date Prepared | Date Analyzed | Flags |
|-------------------|-----------------------|-----|-----------|---------------|---------------|-------|
| <b>Client ID:</b> | <b>MW-2-19:051723</b> |     |           |               |               |       |
| Laboratory ID:    | 05-214-01             |     |           |               |               |       |
| Arsenic           | <b>ND</b>             | 3.3 | EPA 200.8 | 5-26-23       | 5-26-23       |       |

|                   |                       |     |           |         |         |  |
|-------------------|-----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-6-22:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-02             |     |           |         |         |  |
| Arsenic           | <b>ND</b>             | 3.3 | EPA 200.8 | 5-26-23 | 5-26-23 |  |

|                   |                       |     |           |         |         |  |
|-------------------|-----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-7-22:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-03             |     |           |         |         |  |
| Arsenic           | <b>ND</b>             | 3.3 | EPA 200.8 | 5-26-23 | 5-26-23 |  |

|                   |                       |     |           |         |         |  |
|-------------------|-----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-8-22:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-04             |     |           |         |         |  |
| Arsenic           | <b>4.0</b>            | 3.3 | EPA 200.8 | 5-26-23 | 5-26-23 |  |

|                   |                       |     |           |         |         |  |
|-------------------|-----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-9-22:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-05             |     |           |         |         |  |
| Arsenic           | <b>3.9</b>            | 3.3 | EPA 200.8 | 5-26-23 | 5-26-23 |  |

|                   |                      |     |           |         |         |  |
|-------------------|----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-100:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-06            |     |           |         |         |  |
| Arsenic           | <b>4.1</b>           | 3.3 | EPA 200.8 | 5-26-23 | 5-26-23 |  |

|                   |                       |     |           |         |         |  |
|-------------------|-----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-3-19:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-07             |     |           |         |         |  |
| Arsenic           | <b>25</b>             | 3.3 | EPA 200.8 | 5-26-23 | 5-26-23 |  |



Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

**TOTAL ARSENIC  
 EPA 200.8  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

| Analyte             | Result    | PQL | Method    | Date Prepared | Date Analyzed | Flags |
|---------------------|-----------|-----|-----------|---------------|---------------|-------|
| <b>METHOD BLANK</b> |           |     |           |               |               |       |
| Laboratory ID:      | MB0526WM1 |     |           |               |               |       |
| Arsenic             | ND        | 3.3 | EPA 200.8 | 5-26-23       | 5-26-23       |       |

| Analyte          | Result    | Spike Level | Source Result | Percent Recovery | Recovery Limits | RPD | RPD Limit | Flags |
|------------------|-----------|-------------|---------------|------------------|-----------------|-----|-----------|-------|
| <b>DUPLICATE</b> |           |             |               |                  |                 |     |           |       |
| Laboratory ID:   | 05-147-02 |             |               |                  |                 |     |           |       |
|                  | ORIG      | DUP         |               |                  |                 |     |           |       |
| Arsenic          | 21.4      | 23.1        | NA            | NA               | NA              | NA  | 7         | 20    |

**MATRIX SPIKES**

|                |           |     |     |     |      |     |     |        |   |    |
|----------------|-----------|-----|-----|-----|------|-----|-----|--------|---|----|
| Laboratory ID: | 05-147-02 |     |     |     |      |     |     |        |   |    |
|                | MS        | MSD | MS  | MSD |      | MS  | MSD |        |   |    |
| Arsenic        | 140       | 150 | 111 | 111 | 21.4 | 107 | 116 | 75-125 | 7 | 20 |



Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

**DISSOLVED ARSENIC**  
**EPA 200.8**

Matrix: Water  
 Units: ug/L (ppb)

| Analyte           | Result                | PQL | Method    | Date Prepared | Date Analyzed | Flags |
|-------------------|-----------------------|-----|-----------|---------------|---------------|-------|
| <b>Client ID:</b> | <b>MW-2-19:051723</b> |     |           |               |               |       |
| Laboratory ID:    | 05-214-01             |     |           |               |               |       |
| Arsenic           | <b>ND</b>             | 3.0 | EPA 200.8 | 5-19-23       | 5-26-23       |       |

|                   |                       |     |           |         |         |  |
|-------------------|-----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-6-22:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-02             |     |           |         |         |  |
| Arsenic           | <b>ND</b>             | 3.0 | EPA 200.8 | 5-19-23 | 5-26-23 |  |

|                   |                       |     |           |         |         |  |
|-------------------|-----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-7-22:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-03             |     |           |         |         |  |
| Arsenic           | <b>ND</b>             | 3.0 | EPA 200.8 | 5-19-23 | 5-26-23 |  |

|                   |                       |     |           |         |         |  |
|-------------------|-----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-8-22:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-04             |     |           |         |         |  |
| Arsenic           | <b>ND</b>             | 3.0 | EPA 200.8 | 5-19-23 | 5-26-23 |  |

|                   |                       |     |           |         |         |  |
|-------------------|-----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-9-22:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-05             |     |           |         |         |  |
| Arsenic           | <b>ND</b>             | 3.0 | EPA 200.8 | 5-19-23 | 5-26-23 |  |

|                   |                      |     |           |         |         |  |
|-------------------|----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-100:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-06            |     |           |         |         |  |
| Arsenic           | <b>ND</b>            | 3.0 | EPA 200.8 | 5-19-23 | 5-26-23 |  |

|                   |                       |     |           |         |         |  |
|-------------------|-----------------------|-----|-----------|---------|---------|--|
| <b>Client ID:</b> | <b>MW-3-19:051723</b> |     |           |         |         |  |
| Laboratory ID:    | 05-214-07             |     |           |         |         |  |
| Arsenic           | <b>14</b>             | 3.0 | EPA 200.8 | 5-19-23 | 5-26-23 |  |





Date of Report: May 31, 2023  
 Samples Submitted: May 18, 2023  
 Laboratory Reference: 2305-214  
 Project: 21-1-22247-112

**DISSOLVED ARSENIC  
 EPA 200.8  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

| Analyte             | Result   | PQL | Method    | Date Prepared | Date Analyzed | Flags |
|---------------------|----------|-----|-----------|---------------|---------------|-------|
| <b>METHOD BLANK</b> |          |     |           |               |               |       |
| Laboratory ID:      | MB0519F1 |     |           |               |               |       |
| Arsenic             | ND       | 3.0 | EPA 200.8 | 5-19-23       | 5-26-23       |       |

| Analyte          | Result    | Spike Level | Source Result | Percent Recovery | Recovery Limits | RPD | RPD Limit | Flags |
|------------------|-----------|-------------|---------------|------------------|-----------------|-----|-----------|-------|
| <b>DUPLICATE</b> |           |             |               |                  |                 |     |           |       |
| Laboratory ID:   | 05-214-01 |             |               |                  |                 |     |           |       |
|                  | ORIG      | DUP         |               |                  |                 |     |           |       |
| Arsenic          | ND        | ND          | NA            | NA               | NA              | NA  | NA        | 20    |

**MATRIX SPIKES**

|                |           |      |      |      |    |    |     |             |
|----------------|-----------|------|------|------|----|----|-----|-------------|
| Laboratory ID: | 05-214-01 |      |      |      |    |    |     |             |
|                | MS        | MSD  | MS   | MSD  |    | MS | MSD |             |
| Arsenic        | 77.4      | 80.2 | 80.0 | 80.0 | ND | 97 | 100 | 75-125 4 20 |





### 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.
- X2 - Sample extract treated with a 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.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





**Onsite Environmental Inc.**

Analytical Laboratory Testing Services  
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# Chain of Custody

Page 1 of 1

## Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days)

☐ \_\_\_\_\_ (other)

Laboratory Number: **05-214**

Company: Shannon & Wilson  
Project Number: 21-1-22247-112  
Project Name: Former Montlake Gas Station  
Project Manager: Joseph Sawdley  
Sampled by: MKH

| Lab ID | Sample Identification | Date Sampled | Time Sampled | Matrix |
|--------|-----------------------|--------------|--------------|--------|
| 1      | MW-2-19: 051723       | 5/17/23      | 0950         | MW     |
| 2      | MW-6-22: 051723       |              | 1310         |        |
| 3      | MW-7-22: 051723       |              | 1130         |        |
| 4      | MW-8-22: 051723       |              | 1220         |        |
| 5      | MW-9-22: 051723       |              | 1410         |        |
| 6      | MW-100: 051723        |              | 1700         |        |
| 7      | MW-3-19: 051723       |              | 1515         |        |

## Number of Containers

|   |       |
|---|-------|
| NWTPH-HCID  |       |
| NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> ) |       |
| NWTPH-Gx  |       |
| NWTPH-Dx (SG Clean-up <input type="checkbox"/> )  |       |
| Volatiles 8260  |       |
| Halogenated Volatiles 8260  |       |
| EDB EPA 8011 (Waters Only)  |       |
| Semivolatiles 8270/SIM (with low-level PAHs)  |       |
| PAHs 8270/SIM (low-level)   |       |
| PCBs 8082   |       |
| Organochlorine Pesticides 8081  |       |
| Organophosphorus Pesticides 8270/SIM  |       |
| Chlorinated Acid Herbicides 8151  |       |
| Total RCRA Metals   |       |
| Total MTCA Metals   |       |
| TCLP Metals   |       |
| HEM (oil and grease) 1664   |       |
| Total & dissolved Arsenic   | 200.8 |
| % Moisture  |       |

| Lab ID | Sample Identification | Date Sampled | Time Sampled | Matrix | Number of Containers | NWTPH-HCID | NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> ) | NWTPH-Gx | NWTPH-Dx (SG Clean-up <input type="checkbox"/> ) | Volatiles 8260 | Halogenated Volatiles 8260 | EDB EPA 8011 (Waters Only) | Semivolatiles 8270/SIM (with low-level PAHs) | PAHs 8270/SIM (low-level) | PCBs 8082 | Organochlorine Pesticides 8081 | Organophosphorus Pesticides 8270/SIM | Chlorinated Acid Herbicides 8151 | Total RCRA Metals | Total MTCA Metals | TCLP Metals | HEM (oil and grease) 1664 | Total & dissolved Arsenic | % Moisture |
|--------|-----------------------|--------------|--------------|--------|----------------------|------------|---|----------|--|----------------|----------------------------|----------------------------|--|---------------------------|-----------|--------------------------------|--------------------------------------|----------------------------------|-------------------|-------------------|-------------|---------------------------|---------------------------|------------|
| 1      | MW-2-19: 051723       | 5/17/23      | 0950         | MW     | 9                    |            | X   |          | X  |                |                            |                            |  |                           |           |                                |                                      |                                  |                   |                   |             |                           | X                         |            |
| 2      | MW-6-22: 051723       |              | 1310         |        | 9                    |            | X   |          | X  |                |                            |                            |  |                           |           |                                |                                      |                                  |                   |                   |             |                           | X                         |            |
| 3      | MW-7-22: 051723       |              | 1130         |        | 9                    |            | X   |          | X  |                |                            |                            |  |                           |           |                                |                                      |                                  |                   |                   |             |                           | X                         |            |
| 4      | MW-8-22: 051723       |              | 1220         |        | 9                    |            | X   |          | X  |                |                            |                            |  |                           |           |                                |                                      |                                  |                   |                   |             |                           | X                         |            |
| 5      | MW-9-22: 051723       |              | 1410         |        | 9                    |            | X   |          | X  |                |                            |                            |  |                           |           |                                |                                      |                                  |                   |                   |             |                           | X                         |            |
| 6      | MW-100: 051723        |              | 1700         |        | 9                    |            | X   |          | X  |                |                            |                            |  |                           |           |                                |                                      |                                  |                   |                   |             |                           | X                         |            |
| 7      | MW-3-19: 051723       |              | 1515         |        | 9                    |            | X   |          | X  |                |                            |                            |  |                           |           |                                |                                      |                                  |                   |                   |             |                           | X                         |            |

Signature \_\_\_\_\_ Company \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Comments/Special Instructions \_\_\_\_\_

Lab to Filter for Metals

|               |                    |                     |                     |                  |   |
|---------------|--------------------|---------------------|---------------------|------------------|---|
| Relinquished  | Signature <u>M</u> | Company <u>SWI</u>  | Date <u>5/18/23</u> | Time <u>0900</u> | Comments/Special Instructions   |
| Received      | <u>#17</u>         | <u>Speedy Alpha</u> | <u>5/18/23</u>      | <u>10:30</u>     |   |
| Relinquished  | <u>#17</u>         | <u>Speedy Alpha</u> | <u>5/18/23</u>      | <u>12:13</u>     |   |
| Received      | <u>#17</u>         | <u>Speedy Alpha</u> | <u>5/18/23</u>      | <u>12:13</u>     |   |
| Relinquished  |                    |                     |                     |                  |   |
| Received      |                    |                     |                     |                  |   |
| Reviewed/Date |                    | Reviewed/Date       |                     |                  | Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/><br>Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/> |