JUNE 2023
GROUNDWATER SAMPLING EVENT REPORT

FOR

HAHN MOTOR COMPANY
1201 SOUTH 1ST STREET
YAKIMA, WASHINGTON 98901

Facility Site ID No. 502
Cleanup Site ID No. 4927
VCP Project No. CE0529

July 10, 2023

Prepared for:

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PROJECT SUMMARY

Client:	Ms. Debra Manjarrez Manjarrez & De Leon Inc, PS 2010 West Nob Hill Blvd, Suite 1 Yakima, Washington 98902
Point of Contact:	Ms. Debra Manjarrez
Property:	Hahn Motor Company 1201 South 1st Street Yakima, Washington 98901
Major Commercial Activity:	Automotive Sales and Automobile Repair
VCP Project ID Number:	CE0529
Licensed Hydrogeologist/Geologist:	Brent N. Bergeron, LHG, LG
License Number/Expiration:	LHG #2267, expires 1/3/2024 LG #2267, expires 1/3/2024
Project Number:	E2023/0407 and E2023/0607
Report Date:	July 10, 2023

Legal description: Tax Parcel 191330-13032 in the southwest quarter of the northeast quarter of Section 30, Township 13 North, Range 19 E.W.M; Latitude 46º 35' 17.37" North, Longitude 120º 29'52.41" West.

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1.0 INTRODUCTION

On May 19, 2023, Blue Mountain Environmental and Consulting Company, Inc. (BMEC) mobilized to 1201 South 1st Street in Yakima, Washington 98901 (Site) and performed supervision of monitoring well installation activities at the Site. On June 13, 2023, BMEC personnel returned to the Site and developed the four newly installed monitoring wells, as well as conducted a groundwater sampling event (GWSE) involving all nine monitoring wells. A Site Vicinity Map is included as **Figure 1**. A Site Location Map is included as **Figure 2**.

The scope of work (SOW) for the May 2023 monitoring well installation event was as follows per the State of Washington Department of Ecology (Ecology) Opinion Letter dated March 14, 2023:

- Supervise Anderson Environmental Contracting (AEC) from Puyallup, Washington during the installation of four monitoring wells (MW3A, MW7, MW8, and MW9) via terra sonic drilling methodology;
- Collect soil samples from each of the four borings and relinquish them to a Washington-accredited laboratory for the following analyses: total petroleum hydrocarbons – diesel range (TPH-D) and TPH – heavy oil range (TPH-O) via Northwest Method NWTPH-Dx, chlorinated volatile organic compounds (VOCs) via Environmental Protection Agency (EPA) Method 8260, as well as dissolved and total metals via EPA Method 200.8/7470A; and
- Document the findings in a detailed report.

Rationale for the installation of monitoring wells MW3A, MW7, MW8, and MW9 is included below in Section 4.0.

The SOW for the June 2023 GWSE was as follows per the Ecology Opinion Letter dated March 14, 2023:

- Collect depth-to-water measurements from all nine wells (MW1 through MW9);
- Develop newly installed monitoring wells MW3A, MW7, MW8, and MW9;
- Collect groundwater samples from each of the nine monitoring wells and relinquish them to a Washington-accredited laboratory for the following analyses: TPH-D and TPH–O via Northwest Method NWTPH-Dx, chlorinated VOCs via EPA Method 8260, as well as dissolved and total metals via EPA Method 200.8/7470A; and
- Document the findings in a detailed report including soil and groundwater laboratory analytical results, as well as the groundwater flow direction of the shallow aquifer.

A copy of the March 14, 2023 Ecology Opinion Letter is included as **Appendix A.**

1.1 Location

The 1.5-acre (approximate) Site is located in the City of Yakima, Yakima County, Washington, at the southeast corner of the intersection of South 1st Street and East Arlington Street (**Figures 2 - 4**). The Site consists of one tax parcel (191330-13032) and is located in the southwest quarter of the northeast quarter of Section 30, Township 13 North, Range 19 E.W.M. The elevation is approximately 1,040 feet above mean sea level and the Site is relatively flat with primarily asphalt ground cover. The nearest major body of water is the Yakima River approximately 1.5 miles east of the Site. The Site is surrounded by commercial then residential property to the east, commercial property then light industry to the north, commercial property to the northwest, commercial

property then railroad property to the west, and commercial property to the south. There are no flood zones or wetlands associated with the Site.

1.2 General Site Information

As of February 23, 2016, the property was owned by Mr. Richard Hahn. The current owner of the property is the Estate of Douglas F Bettarel, represented by Ms. Debra Manjarrez of Manjarrez and De Leon Inc, PS. BMEC is currently working for Manjarrez and De Leon Inc, PS.

One building is located on the Site (**Figures 2 – 4**). The rectangular building located on the northwest corner of the property consists of an automobile showroom with offices on the western half, bathrooms and break room near the center of the building, and an automobile repair and automobile wash bay in the eastern half of the building. During the visit to the Site on February 1, 2022, a minimum of one sump was noticed on the interior of the eastern half of the building. The sump appeared to drain to the south toward the drywells which BMEC investigated via soil and groundwater sampling on February 1, 2022. The drywells and all associated petroleum and metals impacted soils were removed on July 12 and 13, 2022, and replaced on July 14, 2022 with a single dry well to collect stormwater runoff from the paved yard area.

2.0 GEOLOGY AND HYDROGEOLOGY

Based on the subsurface investigation field activities conducted at the Site on September 27 and 28, 2022, the following geologic soil conditions were encountered in soil borings MW1 and MW3 through MW6:

- 0 – 0.25': Asphalt.
- 0.25 – 2': Brown SILT (ML);
- 2 – 20': Brown to dark brown, sandy, well-rounded, coarse GRAVEL & COBBLES, with little silt, loose (GW); and
- 20 -25': Brown – gray, SAND & GRAVEL, well-rounded, coarse, loose, wet – very wet (SP/GP).

During the May 19, 2023 monitoring well installation activities, soil lithology in wells MW3A and MW7 through MW9 was similar to the afore-mentioned soil with predominantly brown to gray-brown sandy, rounded, coarse GRAVELS (GW) from 2.5 to 30 feet below ground surface (bgs) and groundwater saturation noted from 18 - 22 feet bgs. Boring logs for monitoring wells MW3A and MW7 through MW9 are included in **Appendix B**. During the June 13, 2023 GWSE, depth to groundwater was measured around 18 - 20 feet below top of casing (btoc) in all nine wells. Groundwater flow direction was to the southeast at 0.004 feet per foot on June 13, 2023.

During the February 1, 2022, field activities, groundwater was encountered in soil borings SB1 at 11 feet bgs, SB3 at 16.3 feet bgs, SB4 at 18 feet bgs, and SB5 at 14.5 feet bgs. During the October 3, 2022, GWSE conducted at the Site, depths-to-groundwater ranged from 15.48 feet btoc in well MW1, to 16.66 feet btoc in well MW2. The groundwater flow direction was determined to be to

the southeast toward the Yakima River which is approximately 1.5 miles east of the Site with a hydraulic gradient of 0.005 feet per foot. The estimated flow direction in the deeper aquifer beneath the Site is also to the southeast with an approximate hydraulic gradient of 0.004 feet per foot.

3.0 PREVIOUS ENVIRONMENTAL FIELD ACTIVITIES

The existing facility was built in 1946 by Hahn Motors Company. A 2,000-gallon heating oil underground storage tank (UST) for the oil-fired boiler was installed in the northwest side of the building's basement to provide heat for the facility. A second 2,000-gallon UST was installed at the facility in the mid-1970's and both USTs were used to store used oil after the boiler was converted to burn used motor oil, which was plentiful, available from the on-site conducted car services.

It was determined by Ecology on July 9, 2007, and documented via certified mail dated July 26, 2007, that Hahn Motor Company was in *Non-Compliance with the Underground Storage Tank Regulations Chapter 173-360* for not properly registering and upgrading their 2,000-gallon USTs prior to storage of waste oil. Via directive from Ecology as defined in the July 26, 2007 certified mail, both USTs were decommissioned by removal and backfill in November 2007. Approximately 50 cubic yards of petroleum-contaminated soil (PCS) and asphalt were hauled off-site and disposed at the Anderson Disposal Facility in Yakima, Washington.

During the November 9, 2007, UST decommissioning activities, three soil samples were collected from the west, north, and east side of the eastern UST, yielding one heavy oil detection of 396 milligrams per Kilogram (mg/Kg) in the west sample. Similarly, three soil samples were collected from the west, north, and east side of the eastern UST, yielding heavy oil detections ranging between 155 – 492 mg/Kg. The MTCA Method A Cleanup Level for heavy oil is 2,000 mg/Kg. No gasoline range hydrocarbons were identified by laboratory analysis in any soil samples collected. Significant lead concentrations were detected in residual soil sampled and analyzed from the tank bottom(s).

In 2017, Ecology conducted semi-annual groundwater sampling of the Yakima RailRoad Area (YRRA) groundwater monitoring network which is a six-square mile area located along the railroad corridor in the cities of Yakima and Union Gap, Washington. The YRRA was defined in 1991. The Site is located near the center of the YRRA which is impacted by chlorinated solvents, primarily tetrachloroethene (PCE). Circa 2017, 15 of the 39 groundwater samples collected from wells within the YRRA yielded concentrations ranging from 5 to 9,110 micrograms per liter (µg/L). The MTCA Cleanup Level for PCE in groundwater is 5 µg/L.

3.1 February 2022 - Subsurface Investigation

On February 1, 2022, BMEC hydrogeologist, Brent Bergeron, LHG, and BMEC environmental professional Yancy Meyer, supervised the advancement of six soil borings (SB1 through SB6) to depths varying between 15 feet and 25 feet bgs. The six soil borings were advanced via sonic drilling methodology by Environmental West Explorations (EWE) personnel.

TPH-D was only quantified in one of the 21 soil samples at a concentration of 670 mg/Kg in sample SB1-2-1-22-10'. TPH-O was quantified in three of the 21 soil samples at concentrations of 1400 mg/Kg in sample SB1-2-1-22-10'; 6900 mg/Kg in sample SB5-2-1-22-10'; and 1100 mg/Kg in sample SB5-2-1-22-15'. The MTCA Method A Cleanup Level for TPH-D + TPH-O is 2000 mg/Kg which was only exceeded in samples SB1-2-1-22-10' and SB5-2-1-22-10'. TPH-G was performed on one soil sample. TPH-G was quantified in sample SB1-2-1-22-10' at 220 mg/Kg which exceeds the MTCA Method A Cleanup Level of 30 mg/Kg.

VOCs were analyzed in three soil samples (SB1-2-1-22-10', SB3-2-1-22-25', and SB5-2-1-22-20') and detected in sample SB1-2-1-22-10' at concentrations that due not exceed any MTCA Method A Cleanup Levels. No VOCs were detected in soil samples SB3-2-1-22-25' and SB5-2-1-22-20'.

Cadmium was detected in one sample (SB1-2-1-22-10') at 2.5 mg/Kg which exceeds the MTCA Method A Cleanup Level of 2 mg/Kg. Chromium was detected in all 21 samples at concentrations ranging from 2.9 mg/Kg in sample SB5-2-1-22-20' to 34 mg/Kg in sample SB2-2-1-22-5' which was the only soil sample to exceed the MTCA Method A Cleanup Level of 19 mg/Kg. Lead was detected in four of the 21 soil samples at concentrations ranging from 9.4 mg/Kg in sample SB5-2-1-22-5' to 45 mg/Kg in sample SB1-2-1-22-10'. None of the four lead detections exceed the MTCA Method A Cleanup Level of 250 mg/Kg.

Polynuclear aromatic hydrocarbons (PAHs) were analyzed in three soil samples and detected in sample SB1-2-1-22-10' at concentrations that due not exceed any MTCA Method A Cleanup Levels. No PAHs were detected in soil samples SB3-2-1-22-25' and SB5-2-1-22-20'.

TPH-D and/or TPH-O were detected above the laboratory MRLs in all three groundwater samples collected (SB1-2-1-22-GW, SB3-2-1-2-GW, and SB5-2-1-22-GW). Furthermore, TPH-D + TPH-O were detected in samples SB1-2-1-22-GW and SB5-2-1-22-GW at concentrations of 9800 µg/L and 770 µg/L, respectively, which exceeded the MTCA Method A Cleanup Level of 500 µg/L. Groundwater sample SB1-2-1-22-GW was collected from immediately down-gradient of the dry well outside the automobile engine washing bay on the south side of the building and groundwater sample SB5-2-1-22-GW was collected from between the two USTs removed from the north side of the building.

VOCs were analyzed in all three groundwater samples (SB1-2-1-22-GW, SB3-2-1-22-GW, and SB5-2-1-22-GW). A combination of VOCs including PCE, benzene, ethylbenzene, and naphthalene were detected in all three groundwater samples but not at concentrations exceeding established MTCA Method A Cleanup Levels.

Arsenic (total) was detected in all three groundwater samples at concentrations exceeding the MTCA Method A Cleanup Level of 5 µg/L. Arsenic (total) concentrations ranged from 51 µg/L in SB3-2-1-22-GW to 130 µg/L in SB5-2-1-22-GW. Chromium (total) was detected in all three groundwater samples at concentrations exceeding the MTCA Method A Cleanup Level of 50 µg/L. Chromium (total) concentrations ranged from 420 µg/L in SB3-2-1-22-GW to 1100 µg/L in SB5-2-1-22-GW. Lead (total) was detected in all three groundwater samples at concentrations exceeding the MTCA Method A Cleanup Level of 15 µg/L. Lead (total) concentrations ranged

from 150 µg/L in SB3-2-1-22-GW to 1200 µg/L in SB1-2-1-22-GW. Cadmium (total) was detected in groundwater samples SB1-2-1-22-GW and SB5-2-1-22-GW at 110 µg/L and 6.4 µg/L, respectively. The MTCA Method A Cleanup Level for cadmium (total) in groundwater is 5 µg/L.

PAHs were analyzed in all three grab groundwater samples (SB1-2-1-22-GW, SB3-2-1-22-GW, and SB5-2-1-22-GW). A combination of PAHs including 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were detected in all three groundwater samples; however, not at concentrations exceeding established MTCA Method A Cleanup Levels.

Polychlorinated biphenyls (PCBs) were analyzed in groundwater samples (SB1-2-1-22-GW, SB3-2-1-22-GW, and SB5-2-1-22-GW). PCBs were not detected above the laboratory practical quantitation limits (PQLs) in any of the three samples.

3.2 July 2022 - Dry Well Removal

From July 12 – 14, 2022, BMEC personnel supervised Clarke Construction personnel during the removal of both dry wells south of the main onsite building and collected 13 confirmation soil samples in the process. Confirmation samples indicated no contaminants (i.e., benzene, toluene, ethylbenzene, and xylenes [BTEX]; TPH-D; TPH-O; TPH-G; arsenic; cadmium; chromium; and lead) above Ecology MTCA Method A Cleanup Levels. On July 14, 2022, after receiving soil sample results, a new drywell was placed in the location of Former Drywell 2 to allow for stormwater drainage from the parking lot, and the excavation was backfilled, compacted to grade, and paved with asphalt.

3.3 September 2022 - Additional Subsurface Investigation

On September 27 and 28, 2022, BMEC hydrogeologist, Brent Bergeron, LHG, and BMEC environmental professional Yancy Meyer, supervised AEC personnel during the advancement of six soil borings (MW1 through MW6) to depths of 25 feet bgs via sonic drilling. Each boring was completed as a 2-inch diameter flush-mounted monitoring well and subsequently developed.

TPH-Dx was performed on 12 soil samples. TPH-D was only quantified in one of the 12 soil samples at a concentration of 76 mg/Kg in sample MW3-9-27-22-15'. TPH-O was quantified in three of the 12 soil samples at concentrations of 300 mg/Kg in sample MW3-9-27-22-15' to 1000 mg/Kg in sample MW6-9-27-22-21'. The MTCA Method A Cleanup Level for TPH-D + TPH-O is 2000 mg/Kg which was not exceeded in any of the 12 soil samples. TPH-G was performed on all 12 soil samples. TPH-G was not detected in any of the 12 soil samples. VOCs were analyzed in all 12 soil samples. Index parameters such as BTEX plus naphthalene were not detected in any of the 12 soil samples. Resource Conservation and Recovery Act (RCRA) metals analyses were performed on all 12 soil samples. Arsenic, cadmium, mercury, selenium, and silver were not detected above the laboratory PQLs in any of the samples. Barium was detected in all 12 samples at concentrations ranging up to 65 mg/Kg in sample MW6-9-27-22-21'. A MTCA Method A Cleanup Level does not currently exist for barium. Chromium (hexavalent + trivalent) was detected in all 12 samples at concentrations ranging up to 16 mg/Kg in soil sample MW1-9-28-22-19'. None of the 12 chromium detections exceed the MTCA Method A Cleanup Level for chromium of 19 mg/Kg. Lead was detected in three of the 12 soil samples at concentrations ranging

up to 11 mg/Kg in sample MW6-9-27-22-21'. None of the three lead detections exceed the MTCA Method A Cleanup Level of 250 mg/Kg.

TPH-D and/or TPH-O were not detected above the laboratory PQLs in all six groundwater samples collected from monitoring wells MW1 through MW6. Furthermore, TPH-G was not detected above the laboratory PQLs in the six groundwater samples. VOCs were analyzed in all six groundwater samples collected from monitoring wells MW1 through MW6. A combination of VOCs including PCE and BTEX were detected in all six groundwater samples but not at concentrations exceeding established MTCA Method A Cleanup Levels.

RCRA (total) metals were analyzed in all six groundwater samples collected from monitoring wells MW1 through MW6. Mercury was detected in three of the groundwater samples at concentrations ranging from 0.61 µg/L in well MW6 to 1.5 µg/L in well MW4. The MTCA Method A Cleanup Level for mercury is 2 µg/L. Selenium was detected in three of the groundwater samples at concentrations ranging from 5.9 µg/L in well MW6 to 9.9 µg/L in well MW4. No MTCA Method A Cleanup Level currently is established for selenium. Barium was detected in all six of the groundwater samples at concentrations ranging from 340 µg/L in well MW1 to 2700 µg/L in well MW4. No MTCA Method A Cleanup Level currently is established for barium. Cadmium and silver were not detected above the laboratory PQLs in any of the six groundwater samples.

Arsenic (total) was detected in all six groundwater samples at concentrations exceeding the MTCA Method A Cleanup Level of 5 µg/L. Arsenic (total) concentrations ranged from 12 µg/L in the groundwater sample collected from well MW1 to 67 µg/L in MW4. Total chromium (hexavalent + trivalent) was detected in all six groundwater samples at concentrations exceeding the MTCA Method A Cleanup Level of 50 µg/L. Chromium (total) concentrations ranged from 81 µg/L in well MW6 to 430 µg/L in MW2. Lead (total) was detected in all six groundwater samples at concentrations exceeding the MTCA Method A Cleanup Level of 15 µg/L. Lead (total) concentrations ranged from 16 µg/L in the groundwater collected from well MW1 to 160 µg/L in well MW2. The highest detections of total chromium (hexavalent + trivalent) and total lead were in the groundwater sample collected from well MW2 which is located near the northwest property corner between the two former USTs. The second highest total chromium and total lead detections in groundwater were detected in the sample collected from well MW4 located in the northeast corner of the Site. The two highest total arsenic concentrations were detected in wells MW4 and MW2, respectively.

3.4 October 2022 – Groundwater Sampling Event

On October 3, 2022, BMEC personnel returned to the Site to conduct a GWSE involving all six monitoring wells (MW1 through MW6). TPH-D and/or TPH-O were not detected above the laboratory PQLs in all of the six groundwater samples collected from monitoring wells MW1 through MW6.

Various VOCs including PCE were detected in groundwater samples collected from all six monitoring wells (MW through MW6). None of the VOC detections exceeded established MTCA Method A Cleanup Levels. PCE concentrations were detected in all six groundwater samples and

ranged from 1.1 µg/L in well MW4 to 2.6 µg/L in well MW1. The Cleanup Level for PCE in groundwater is 5 µg/L.

Total RCRA metals were detected in groundwater samples collected from all six monitoring wells (MW1 through MW6). Barium was detected in all six groundwater samples at concentrations ranging from 340µg/L in well MW1 to 2700 µg/L in well MW4. No MTCA Method A Cleanup Level in groundwater currently exists for barium. Selenium was detected in groundwater samples collected from wells MW2, MW4, and MW6 at concentrations of 7.6 µg/L, 9.9 µg/L, and 5.9 µg/L, respectively. No MTCA Method A Cleanup Level in groundwater currently exists for selenium. Mercury was detected in groundwater samples collected from wells MW2, MW4, and MW6 at concentrations of 1.2 µg/L, 1.5 µg/L, and 0.65 µg/L, respectively. The MTCA Method A Cleanup Level for mercury in groundwater is 2 µg/L.

3.5 December 2022 – Groundwater Sampling Event

On December 15, 2022, BMEC personnel returned to the Site to conduct a GWSE involving all six monitoring wells (MW1 through MW6). TPH-D and/or TPH-O were not detected above the laboratory PQLs in five of the six groundwater samples collected from monitoring wells MW1 and MW3 through MW6. Lube oil (i.e., TPH-O) was detected in the groundwater sample collected from monitoring well MW2 at a concentration of 240 mg/L which does not exceed the MTCA Method A Cleanup Level of 500 mg/L. TPH-G was not detected above the laboratory PQLs in the six groundwater samples.

VOCs were analyzed in all six groundwater samples. A combination of VOCs including PCE, BTEX, and miscellaneous VOCs (i.e., chloroform, carbon disulfide, n-propylbenzene, p-isopropytoluene, and n-butylbenzene) were detected in all six groundwater samples but at concentrations that do not exceed established MTCA Method A Cleanup Levels. PCE was detected in groundwater samples obtained from all six monitoring wells at concentrations ranging from 1.1 µg/L in well MW6 to 1.7 µg/L in the groundwater samples collected from wells MW1 and MW2. Benzene was detected in groundwater samples collected from monitoring wells MW2 and MW4 at 0.22 µg/L and 0.23 µg/L, respectively. The MTCA Method A Cleanup Levels for PCE and benzene are each 5 µg/L.

RCRA (total) metals were analyzed in all six groundwater samples collected from monitoring wells MW1 through MW6. Selenium was detected in two of the groundwater samples at concentrations ranging from 6.7 µg/L in well MW3 to 11 µg/L in well MW6. No MTCA Method A Cleanup Level currently is established for selenium. Barium was detected in all six of the groundwater samples at concentrations ranging from 580 µg/L in well MW1 to 1900 µg/L in wells MW4 and MW6. No MTCA Method A Cleanup Level currently is established for barium. Cadmium and silver were not detected above the laboratory PQLs in any of the six groundwater samples.

Arsenic (total) was detected in all six groundwater samples at concentrations exceeding the MTCA Method A Cleanup Level of 5 µg/L. Arsenic (total) concentrations ranged from 28 µg/L in the groundwater samples collected from wells MW1 and MW5 to 150 µg/L in MW6. Chromium (hexavalent + trivalent) was detected in all six groundwater samples at concentrations exceeding

the MTCA Method A Cleanup Level of 50 µg/L. Chromium concentrations ranged from 150 µg/L in well MW1 to 340 µg/L in MW3. Lead was detected in all six groundwater samples at concentrations exceeding the MTCA Method A Cleanup Level of 15 µg/L. Lead concentrations ranged from 26 µg/L in the groundwater collected from well MW1 to 140 µg/L in well MW6. Mercury was detected in three of the groundwater samples at concentrations ranging from 0.58 µg/L in well MW2 to 2.1 µg/L in well MW6. The MTCA Method A Cleanup Level for mercury is 2 µg/L.

3.6 March 2023 Groundwater Sampling Event

On March 28, 2023, BMEC personnel returned to the Site to conduct a GWSE involving six monitoring wells (MW1 through MW6). TPH-D and/or TPH-O were not detected above the laboratory PQLs in five of the six groundwater samples collected from monitoring wells MW1 and MW3 through MW6. Lube oil (i.e., TPH-O) was detected in the groundwater sample collected from monitoring well MW2 at a concentration of 150 µg/L which does not exceed the MTCA Method A Cleanup Level of 500 µg/L.

The chlorinated VOCs (cis) 1,2-DCE, TCE, VC, and PCE were analyzed in all six groundwater samples. PCE was detected in all six groundwater samples at concentrations ranging from 0.70 µg/L in well MW3 to 2.4 µg/L in well MW2. None of the six groundwater concentrations exceed established MTCA Method A Cleanup Levels (5 µg/L). PCE was the only VOC detected in the six groundwater samples.

RCRA (total and dissolved) metals were analyzed in all six groundwater samples collected from monitoring wells MW1 through MW6. RCRA metals (totals) were not detected above the laboratory PQLs in groundwater samples collected from wells MW2, MW4, MW5, and MW6. Total chromium and total lead were detected at 15 µg/L and 2.5 µg/L, respectively, in the groundwater samples collected from well MW1 with neither value exceeding the MTCA Method A Cleanup Levels of 50 µg/L and 15 µg/L, respectively. Total RCRA metals were detected in the groundwater sample collected from well MW3 at the following concentrations:

- Arsenic at 88 µg/L (MTCA Method A Cleanup Level = 5 µg/L)
- Cadmium at 6.5 µg/L (MTCA Method A Cleanup Level = 5 µg/L)
- Chromium (hexavalent + trivalent) at 1100 µg/L (MTCA Method A Cleanup Level = 50 µg/L)
- Lead at 220 µg/L (MTCA Method A Cleanup Level = 15 µg/L
- Mercury at 1.5 µg/L (MTCA Method A Cleanup Level = 2 µg/L)

As noted above, the total arsenic, total cadmium, total chromium, and total lead concentrations all exceed their respective Cleanup Levels. However, BMEC suspects the extremely high turbidity/high suspended solids content and slow recharge of the well may have impacted the high metals concentrations.

The laboratory analytical results for dissolved RCRA metals concentrations were all non-detect (arsenic, cadmium, chromium [hexavalent + trivalent], lead and mercury). Each of the six groundwater samples submitted to Onsite for dissolved RCRA metals were not field filtered. Instead, each of the six samples were filtered in the lab, prior to analysis.

4.0 MAY 2023 MONITORING WELL INSTALLATION AND JUNE 2023 GROUNDWATER SAMPLING EVENT FIELD METHODOLOGY

BMEC personnel mobilized to the Site on May 19, 2023, to supervise the advancement of four borings, collect eight soil samples from the four borings for laboratory analyses, and complete the four borings as monitoring wells. BMEC personnel mobilized to the Site on June 3, 2023 to develop four newly installed monitoring wells (MW3A, MW7, MW8, and MW9), obtain depth-to-water (DTW) measurements from all nine wells, and collect groundwater samples from all nine monitoring wells (MW1 through MW9) for laboratory analyses. The following text describes the May 2023 and June 2023 field activities in detail.

4.1 May 19, 2023 Monitoring Well Installation Field Methodology

Rationale for the installation of the four monitoring wells (MW3A and MW7 through MW9) is as follows:

- MW3A – Per discussion with Ecology prior to mobilization to the field, well MW3A was proposed as a replacement well for MW3 which was not developing properly, exhibiting high turbidity/high suspended solids, extremely slow recharge, and yielding excessive total metals concentrations. Hence, MW3A was advanced down-gradient of well MW3 and outside of the former drywell excavation to obtain un-compromised data from the undisturbed native soils.
- MW7 – Per the SOW approved by Ecology, this well was installed at an up-gradient location along the western property boundary, in an attempt to assess potential contaminants of concern (CPOCs) migrating onto the Site from off-site sources.
- MW8 - Per the SOW approved by Ecology, this well was installed at an up-gradient location along the western property boundary, in an attempt to assess CPOCs migrating onto the Site from off-site sources.
- MW9 - Per the SOW approved by Ecology, this well was installed at an up-gradient location along the western property boundary, in an attempt to assess CPOCs migrating onto the Site from off-site sources.

All four monitoring wells were advanced via terra sonic methodology. Borings for monitoring wells MW7 through MW9 were advanced to 25 feet bgs and screened from 10 – 25 feet bgs with Schedule 40 polyvinyl chloride (PVC), completed with flush-mounted locking caps. The boring for well MW3A was advanced to 30 feet and screened from 10 – 30 feet bgs with Schedule 40 PVC, completed with a flush-mounted locking cap.

Boring logs for all four newly installed monitoring wells are included in **Appendix B**. Photographs of the field activities are included in **Appendix C**.

Soil collected from all four borings (MW3A and MW7 through MW9) was continuously collected via core barrel/sample bag methodology and field screened via visual observation, olfactorily evidence, and photo-ionization detector (PID). The PID measurements are listed on each of the four boring logs in **Appendix B**. The soil lithology for each boring was assessed by the field hydrogeologist and recorded on the boring logs, as well.

A total of eight soil samples were collected from the four borings and relinquished to OnSite Environmental in Redmond, Washington for a combination of the following analyses:

- TPH-D and TPH-O via Northwest Method NWTPH-Dx;
- RCRA metals (arsenic, cadmium, chromium, lead, and mercury) via EPA Method 6010D/7470A Series for soil and EPA Method 200.8 for groundwater; and
- Select chlorinated VOCs (PCE, trichloroethene [TCE], (cis) 1,2-dichloroethene, and vinyl chloride [VC]) via EPA Method 8260D.

Each soil sample was obtained in one 4-ounce soil container with Teflon-lined lid and two 40-milliliter (mL) glass vials preserved with methanol. The locations of the four borings completed as 2-inch diameter monitoring wells (MW3A and MW7 through MW9) are illustrated on **Figures 3 and 4**.

A fresh pair of nitrile gloves was donned prior to collection of each successive soil sample. All soil cuttings were containerized in a series of 55-gallon drums which were properly labeled, sealed, and staged onsite near the eastern gate access. Used nitrile gloves and paper towels were placed in a trash bag and hauled offsite.

4.2 June 13, 2023 Groundwater Sampling Event Field Methodology

Upon arrival at the Site on June 13, 2023, each monitoring well was opened and DTW measurements were obtained from the PVC top of casing per well. Groundwater parameters of the nine monitoring well samples were measured in the field via a Horiba U-52 for pH, temperature, conductivity, turbidity, and dissolved oxygen. Approximately 3.5 to five gallons were purged from the five existing wells (i.e., MW1, MW2, MW4, MW5, and MW6), prior to stabilization of the groundwater parameters listed above, followed by sample collection. Approximately 10 to 18 gallons were purged from the four newly installed wells (i.e., MW3A, MW7, MW8, and MW9), prior to stabilization of the groundwater parameters listed above, followed by sample collection. Monitoring well MW3 was replaced by well MW3A and is no longer in groundwater sample rotation.

DTW measurements were collected via a Solinst interface probe from monitoring wells MW1 through MW9. DTW values ranged from 17.95 feet below top of casing (btoc) in well MW6 to 19.32 feet btoc in wells MW2 and MW9 (**Table 1**). Groundwater flow direction was to the southeast as illustrated on **Figure 3**. The hydraulic gradient was approximately 0.004 feet per foot.

The suite of analyses performed on each groundwater sample submitted to the laboratory is as follows: TPH-D and TPH-O analysis via Northwest Method NWTPH-Dx; chlorinated VOCs (VC, (cis)1,2-dichloroethene [(cis) 1,2-DCE], TCE, and PCE) via EPA Method 8260D; and total RCRA metals (arsenic, cadmium, chromium, lead, and mercury) via EPA Method 200.8/7470A.

Groundwater was purged from each of the nine wells via peristatic pump and dedicated tubing, prior to samples being collected in the appropriate containers, properly sealed and labeled, and placed on ice in a secured cooler. Each groundwater sample was obtained via four 40-mL glass vials preserved with HCl, two 500-mL amber glass jars preserved with HCl, and one 250-mL plastic container preserved with nitric acid. Upon collection, each groundwater sample was

immediately labeled, sealed, and placed on ice in a secure cooler. The nine groundwater samples were relinquished to OnSite the following day for overnight delivery. Groundwater sample field data sheets for the June 13, 2023 GWSE are included in **Appendix D.**

A fresh pair of nitril gloves was donned, prior to each successive groundwater sample collection. All trash derived from the GWSE activities (i.e., nitrile gloves, paper towels, and tubing) was placed in a plastic bag and placed in an onsite trash receptacle. All purge water was stored in 55-gallon drums temporarily staged onsite.

5.0 MAY 2023 SOIL SAMPLE AND JUNE 2023 GROUNDWATER SAMPLE RESULTS

BMEC collected eight soil samples for laboratory analyses during the May 19, 2023 field activities and nine groundwater samples for laboratory analyses from the nine monitoring wells (MW1 through MW9) during the June 13, 2023 field activities. The following text describes the soil and groundwater results from the May 2023 and June 2023 field activities.

5.1 May 19, 2023 Soil Sample Results

On May 19, 2023, BMEC personnel collected a total of eight soil samples (two samples per boring from MW3A, MW7, MW8, and MW9). TPH-D and/or TPH-O were not detected above the laboratory PQLs in all eight soil samples. TPH results in soil are summarized in **Table 2**.

PCE was detected in three of the eight soil samples at concentrations ranging from 0.0018 mg/Kg in soil sample MW7-5-19-23-25' to 0.0026 mg/Kg in soil sample MW9-5-19-23-27'. None of the three soil sample detections exceed the MTCA Method A Cleanup Level of 0.05 mg/Kg. VC, (cis) 1,2-DCE, and TCE were not detected above the laboratory PQLs in any of the eight soil samples. Chlorinated VOC results in soil are summarized in **Table 3**.

Barium was detected in all eight soil samples at concentrations ranging from 26 mg/Kg in soil sample MW7-5-19-23-18' to 67 mg/Kg in soil sample MW9-5-19-23-27'. A MTCA Method A Cleanup Level does not currently exist for barium. Total chromium (hexavalent + trivalent) was detected in all eight soil samples at concentrations ranging from 5.4 mg/Kg in soil sample MW3a-5-19-23-20' to 12 mg/Kg in soil sample MW9-5-19-23-27'. None of the eight total chromium detections exceed the MTCA Method A Cleanup Level for Cr+6 of 19 mg/Kg. Mercury was detected in soil sample MW9-5-19-23-27' at 0.38 mg/Kg which does not exceed the MTCA Method A Cleanup Level of 2 mg/Kg. Arsenic, cadmium, silver, and selenium were not detected above the laboratory PQLs in any of the eight soil samples. RCRA metal results in soil are summarized in **Table 4**.

A copy of the laboratory analytical report and accompanying chain-of-custody documentation is included as **Appendix E**.

5.2 June 13, 2023 Groundwater Sample Results

On June 13, 2023, BMEC personnel returned to the Site to conduct a GWSE involving all nine monitoring wells (MW1 through MW9). TPH-D and/or TPH-O were not detected above the laboratory PQLs in all nine groundwater samples. TPH results in groundwater are summarized in **Table 5**.

The chlorinated VOCs (cis) 1,2-DCE, TCE, PCE, and VC were analyzed in all nine groundwater samples. VC, (cis) 1,2-DCE, and TCE were not detected above the laboratory PQLs in any of the nine groundwater samples. PCE was detected in all nine groundwater samples at concentrations ranging from 0.97 µg/L in the groundwater sample collected from well MW4 to 2.3 µg/L in the sample collected from well MW2. None of the nine groundwater sample results for PCE exceed the MTCA Method A Cleanup Level of 5 µg/L. Chlorinated VOC results in groundwater are summarized in **Table 6**.

RCRA metals (total) were analyzed in all nine groundwater samples collected from monitoring wells MW1 through MW9. RCRA metals (totals) were not detected above the laboratory PQLs in groundwater samples collected from seven of the nine wells including MW2, MW3A, MW4, MW5, MW6, MW7, and MW9. Lead was detected in the groundwater sample collected from well MW8 at 1.1 µg/L which does not exceed the MTCA Method A Cleanup Level of 15 µg/L. Arsenic, total chromium, and lead were detected in the groundwater sample collected from well MW1 at 9.3 µg/L, 73 µg/L, and 11 µg/L, respectively. The MTCA Method A Cleanup Levels for arsenic (5 µg/L) and total chromium (19 µg/L) in groundwater obtained from MW1 were exceeded. The MTCA Method A Cleanup Level for lead (15 µg/L) was not exceeded. RCRA metal (total) results in groundwater are summarized in **Table 7**.

A copy of the laboratory analytical report and accompanying chain-of-custody documentation is included as **Appendix E**.

6.0 CONCLUSIONS

During the May 19, 2023 monitoring well installation activities, soil lithology in wells MW3A and MW7 through MW9 was predominantly brown to gray-brown sandy, rounded, coarse GRAVELS (GW) from 2.5 to 30 feet bgs and groundwater saturation noted from 18 - 22 feet bgs. During the June 13, 2023 GWSE, depth to groundwater was measured around 18 - 20 feet btoc in all nine wells. Groundwater flow direction was to the southeast at 0.004 feet per foot on June 13, 2023.

On May 19, 2023, BMEC personnel collected a total of eight soil samples (two samples per boring from MW3A, MW7, MW8, and MW9). TPH-D and/or TPH-O were not detected above the laboratory PQLs in all eight soil samples.

PCE was detected in three of the eight soil samples at concentrations ranging from 0.0018 mg/Kg in soil sample MW7-5-19-23-25' to 0.0026 mg/Kg in soil sample MW9-5-19-23-27'. None of the three soil sample detections exceed the MTCA Method A Cleanup Level of 0.05 mg/Kg. VC, (cis) 1,2-DCE, and TCE were not detected above the laboratory PQLs in any of the eight soil samples.

Barium was detected in all eight soil samples at concentrations ranging from 26 mg/Kg in soil sample MW7-5-19-23-18' to 67 mg/Kg in soil sample MW9-5-19-23-27'. A MTCA Method A Cleanup Level does not currently exist for barium. Total chromium (hexavalent + trivalent) was detected in all eight soil samples at concentrations ranging from 5.4 mg/Kg in soil sample MW3a-5-19-23-20' to 12 mg/Kg in soil sample MW9-5-19-23-27'. None of the eight total chromium detections exceed the MTCA Method A Cleanup Level for Cr+6 of 19 mg/Kg. Mercury was detected in soil sample MW9-5-19-23-27' at 0.38 mg/Kg which does not exceed the MTCA Method A Cleanup Level of 2 mg/Kg. Arsenic, cadmium, silver, and selenium were not detected above the laboratory PQLs in any of the eight soil samples.

On June 13, 2023, BMEC personnel returned to the Site to conduct a GWSE involving all nine monitoring wells (MW1 through MW9). TPH-D and/or TPH-O were not detected above the laboratory PQLs in all nine groundwater samples.

Chlorinated VOCs VC, (cis) 1,2-DCE, and TCE were not detected above the laboratory PQLs in any of the nine groundwater samples. PCE was detected in all nine groundwater samples at concentrations ranging from 0.97 µg/L in the groundwater sample collected from well MW4 to 2.3 µg/L in the sample collected from well MW2. None of the nine groundwater sample results for PCE exceed the MTCA Method A Cleanup Level of 5 µg/L.

RCRA metals (totals) were not detected above the laboratory PQLs in groundwater samples collected from seven of the nine wells including MW2, MW3A, MW4, MW5, MW6, MW7, and MW9. Lead was detected in the groundwater sample collected from well MW8 at 1.1 µg/L which does not exceed the MTCA Method A Cleanup Level of 15 µg/L. Arsenic, total chromium, and lead were detected in the groundwater sample collected from well MW1 at 9.3 µg/L, 73 µg/L, and 11 µg/L, respectively. The MTCA Method A Cleanup Levels for arsenic (5 µg/L) and total chromium (19 µg/L) in groundwater obtained from MW1 were exceeded. The MTCA Method A Cleanup Level for lead (15 µg/L) was not exceeded.

Based on the groundwater results for total RCRA metals during this GWSE (June 13, 2023), none of the nine groundwater samples were analyzed for dissolved metals. Arsenic and total chromium (hexavalent + trivalent) concentrations in groundwater collected from monitoring well MW1 are likely due to up-gradient sources. Furthermore, the total chromium concentration is likely due to trivalent chromium (Cr+3) which is less toxic than hexavalent chromium (Cr+6).

The total metals concentrations in groundwater collected from well MW3A on June 13 versus the total metals concentrations in groundwater collected from well MW3 on March 28, 2023, are likely a result of far less turbidity/suspended solid content and greater groundwater recharge.

7.0 RECOMMENDATIONS

BMEC recommends the following actions:

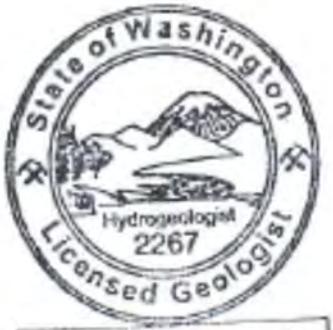
1) Based on groundwater sampling results over the past four quarterly sampling events, the laboratory results suggest that PCE does not exceed the MTCA Method A Cleanup Level of 5 µg/L in groundwater collected from any monitoring well located onsite. Although very low levels of PCE are detectable in the shallow aquifer beneath the Site, BMEC has clearly demonstrated via recent soil sampling and one year of GWSEs that source material does not exist in Site soils and/or groundwater. Hence, further analysis for chlorinated solvents in the Site soils and shallow aquifer beneath the Site is no longer warranted.
2) Based on groundwater sampling results over the past four quarterly sampling events, the laboratory results suggest TPH-D and TPH-O (along with TPH-G) are not a concern in Site soils and groundwater. Hence, further analysis for petroleum hydrocarbons in the shallow aquifer and Site soils beneath the Site is no longer warranted.
3) Based on the lack of petroleum hydrocarbons or chlorinated solvents, in particular PCE, in Site soils or shallow groundwater, vapor intrusion (VI) is an unlikely concern and further VI assessment for the building interior is not necessary.
4) Metals in soil do not appear to be an issue worth pursuing at the Site. Although cadmium exceeded MTCA Method A Cleanup Levels in soil sample SB1-2-1-22-10', the concentration of 2.5 mg/Kg barely eclipsed the Cleanup Level of 2 mg/Kg and this has been the only detection of cadmium in 41 soil samples. The lone detection of cadmium in groundwater collected from monitoring well MW3 on March 28, 2023 is likely attributed to the extremely high suspended solids content for that sample. Although total chromium exceeded MTCA Method A Cleanup Levels in soil sample SB2-2-1-22-5', the concentration is likely attributed to a high concentration of trivalent chromium versus hexavalent chromium. No other metals have been detected in the 41 soil samples at concentrations above the MTCA Method A Cleanup Levels. Hence, further analysis of RCRA metals (As, Ba,Cd, Cr, Pb, Hg, Se, and Ag) in Site soils beneath the Site is no longer warranted.
5) During the June 13, 2023 GWSE, RCRA metals were not detected in seven of the nine groundwater samples. Lead was detected at a concentration of 1.1 µg/L in groundwater obtained from well MW8 which does not exceed the MTCA Method A Cleanup Level of 15 µg/L. Arsenic, total chromium (trivalent + hexavalent), and lead were detected in groundwater obtained from well MW1. The arsenic and total chromium concentrations exceeded the MTCA Method A Cleanup Levels. Monitoring well MW1 is the furthest up-gradient well onsite and likely is heavily influenced by offsite migration of PCOCs (RCRA metals, PCE, and petroleum hydrocarbons). BMEC recommends one more round of groundwater sampling in September 2023 involving all nine monitoring wells for both total and dissolved RCRA metals (As, Cd, Cr, Pb, and Hg). If laboratory analytical results for all nine groundwater samples are below MTCA Method A Cleanup Levels, a No Further Action (NFA) notice is warranted.

8.0 STATEMENT OF ENVIRONMENTAL PROFESSIONALS

BMEC personnel performed these field activities on May 19 and June 13, 2023, in accordance with generally accepted environmental practices and procedures. We employed the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental professionals practicing in the discipline of environmental sciences. The monitoring well installation, soil sampling, and groundwater sampling activities completed were conducted in accordance with standard engineering and geologic standards. However, BMEC was limited by data gaps that were encountered due to previous fieldwork inadequacies and improper documentation. This report is based on the limited data that was provided to BMEC and if additional field data or documentation exists that was not made available to BMEC, we cannot be held accountable for such data gaps or inconsistencies recognizable in this report.

Respectfully Submitted,

Blue Mountain Environmental and Consulting Company, Inc.



Brent N. Bergeron, LHG, LG

P Trabusiner

Peter Trabusiner, Engineer

9.0 REFERENCES

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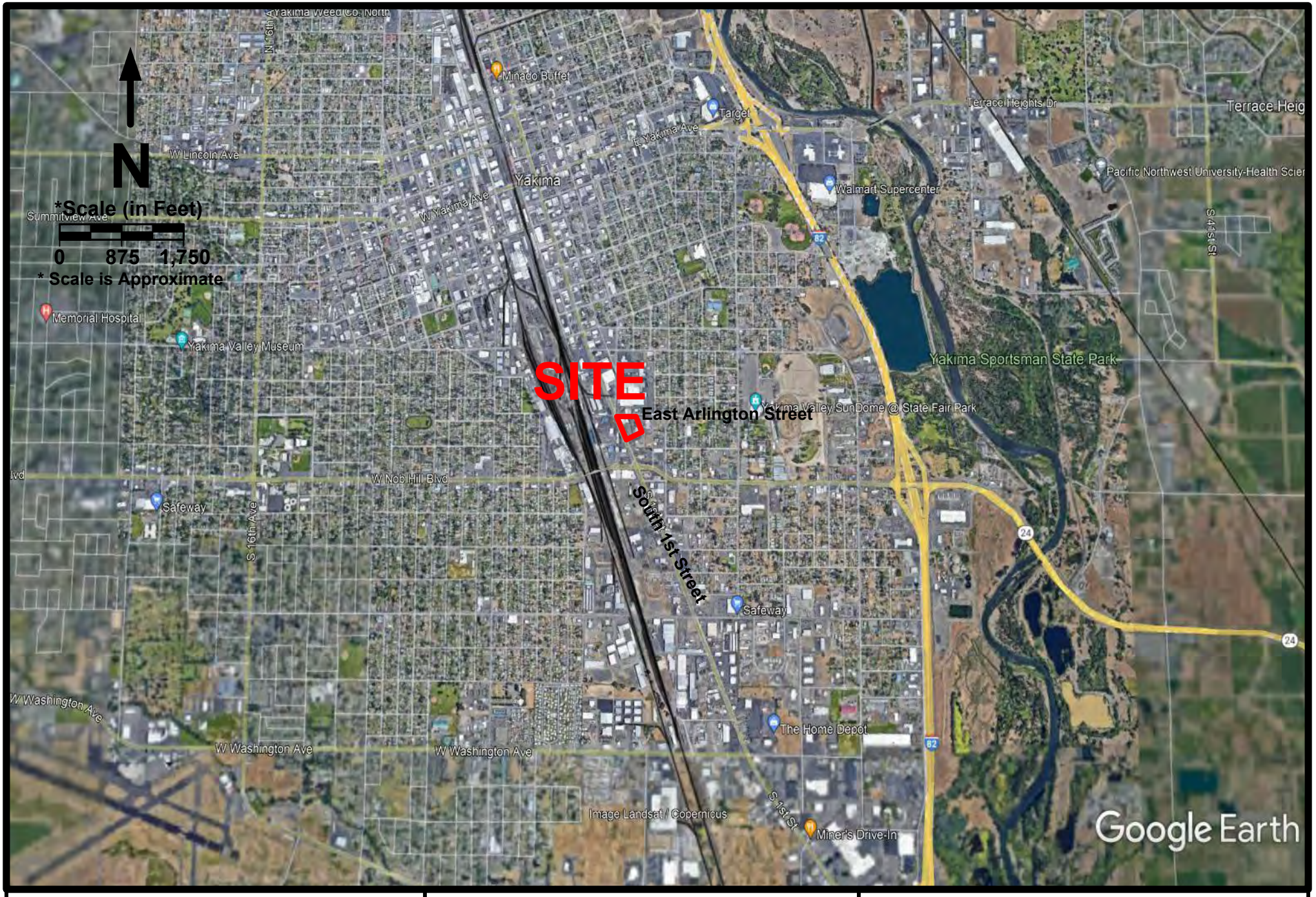
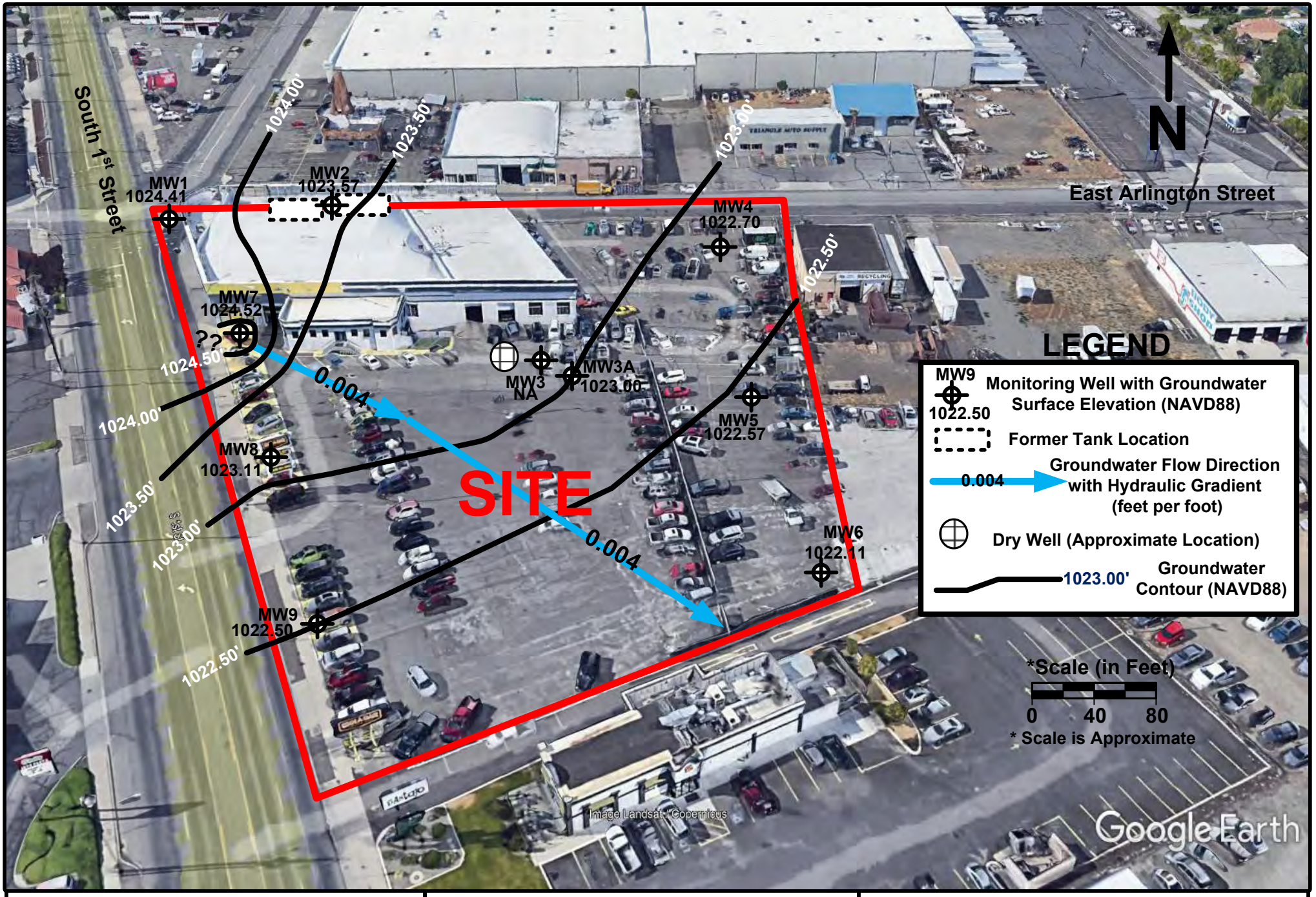


BMEC **P.O. Box 545/125 Main Street** **Waitsburg, Washington 99361**	**FIGURE 1 – SITE VICINITY MAP**	**Hahn Motors Company** **1201 South 1st Street** **Yakima, Washington 98901**

BMEC **P.O. Box 545/125 Main Street** **Waitsburg, Washington 99361**	**FIGURE 2 – SITE LOCATION MAP**	**Hahn Motors Company** **1201 South 1st Street** **Yakima, Washington 98901**



BMEC **P.O. Box 545/125 Main Street** **Waitsburg, Washington 99361**	**FIGURE 3 – GROUNDWATER FLOW DIRECTION** **JUNE 13, 2023**	**Hahn Motors Company** **1201 South 1st Street** **Yakima, Washington 98901** **VCP Project # CE 0529**

BMEC **P.O. Box 545/125 Main Street** **Waitsburg, Washington 99361**	**FIGURE 4 – TOTAL METALS IN GROUNDWATER (µg/L)** **JUNE 13, 2023**	**Hahn Motors Company** **1201 South 1st Street** **Yakima, Washington 98901** **VCP Project # CE 0529**

TABLE 1
Monitoring Well Installation and Groundwater Surface Elevation Data
Former Hahn Motors
1201 S. 1st Street in Yakima, WA 98901

Monitoring Well Number	Date Measured	Top of Casing Elevation (feet NAVD88)	Depth-To-Water Below Top of Casing (feet	Groundwater Elevation (feet NAVD88)	LNAPL Thickness (feet)	Volume of Groundwater Purged (gallons)	Screened Interval (feet bgs)	Sandpack Interval (feet bgs)	Bentonite Interval (feet bgs)
Monitoring Wells									
MW1	10/3/22	1042.69	15.48	1027.21	0.00	15	10 - 25'	8 - 25'	2 - 8'
	12/15/22		18.35	1024.34	0.00	5			
	3/28/23		19.66	1023.03	0.00	5			
	6/13/23		18.28	1024.41	0.00	4			
MW2	10/3/22	1042.89	16.66	1026.23	0.00	15	10 - 25'	8 - 25'	2 - 8'
	12/15/22		19.87	1023.02	0.00	5			
	3/28/23		21.36	1021.53	0.00	2.5			
	6/13/23		19.32	1023.57	0.00	3.5			
MW3	10/3/22	1041.88	16.36	1025.52	0.00	15	10 - 25'	8 - 25'	2 - 8'
	12/15/22		19.06	1022.82	0.00	5			
	3/28/23		21.04	1020.84	0.00	1.5			
MW3A	6/13/23	1042.00	19.00	1023.00	0.00	18.0	10 - 30'	8 - 30'	2 - 8'
MW4	10/3/22	1041.13	16.14	1024.99	0.00	15	10 - 25'	8 - 25'	2 - 8'
	12/15/22		19.37	1021.76	0.00	5			
	3/28/23		21.33	1019.80	0.00	4			
	6/13/23		18.43	1022.70	0.00	3.5			
MW5	10/3/22	1040.73	15.94	1024.79	0.00	15	10 - 25'	8 - 25'	2 - 8'
	12/15/22		19.08	1021.65	0.00	5			
	3/28/23		21.15	1019.58	0.00	4			
	6/13/23		18.16	1022.57	0.00	3.5			
MW6	10/3/22	1040.06	15.57	1024.49	0.00	15	10 - 25'	8 - 25'	2 - 8'
	12/15/22		18.88	1021.18	0.00	5			
	3/28/23		21.18	1018.88	0.00	3			
	6/13/23		17.95	1022.11	0.00	3.5			
MW7	6/13/23	1043.69	19.17	1024.52	0.00	10	10 - 25'	8 - 25'	2 - 8'
MW8	6/13/23	1042.69	19.58	1023.11	0.00	10	10 - 25'	8 - 25'	2 - 8'
MW9	6/13/23	1041.82	19.32	1022.50	0.00	10	10 - 25'	8 - 25'	2 - 8'

Notes:

NAVD88 = North American Vertical Datum 1988

btoc = below top of casing

LNAPL = light, non-aqueous phase liquid

NA = not available

TABLE 2

Soil Sample Results - Total Petroleum Hydrocarbons (mg/Kg)[1]

1201 South First Street

Yakima, Washington 98901

Sample I.D.	Depth (ft bsg)	Date Collected	TPH-Diesel and Heavy Oil by Northwest Method NWTPH-Dx		TPH-Gasoline by Northwest Method NWTPH-Gx
			TPH-D	TPH-O	
SUBSURFACE INVESTIGATION (BMEC) - SEPTEMBER 2022					
MW1-9-28-22-10'	10'	9/28/22	< 26	< 52	< 5.2
MW1-9-28-22-19'	19'	9/28/22	< 27	< 54	< 5.7
MW2-9-28-22-13'	13'	9/28/22	< 58	**660**	< 5.0
MW2-9-28-22-18'	18'	9/28/22	< 28	< 55	< 5.8
MW3-9-27-22-15'	15'	9/27/22	**76**	**300**	< 5.5
MW3-9-27-22-23'	23'	9/27/22	< 27	< 54	< 6.0
MW4-9-27-22-16'	16'	9/27/22	< 26	< 52	< 5.1
MW4-9-27-22-20'	20'	9/27/22	< 26	< 53	< 5.0
MW5-9-27-22-15'	15'	9/27/22	< 26	< 51	< 4.7
MW5-9-27-22-20'	20'	9/27/22	< 27	< 54	< 4.5
MW6-9-27-22-15'	15'	9/27/22	< 26	< 52	< 5.1
MW6-9-27-22-21'	21'	9/27/22	< 37	**1000**	< 5.5
MONITORING WELL INSTALLATION (BMEC) - MAY 2023					
MW3a-5-19-23-20'	20'	5/19/23	< 27	< 53	NA
MW3a-5-19-23-30'	30'	5/19/23	< 27	< 54	NA
MW7-5-19-23-18'	18'	5/19/23	< 27	< 54	NA
MW7-5-19-23-25'	25'	5/19/23	< 27	< 55	NA
MW8-5-19-23-18'	18'	5/19/23	< 26	< 52	NA
MW8-5-19-23-25'	25'	5/19/23	< 29	< 58	NA
MW9-5-19-23-18'	18'	5/19/23	< 26	< 53	NA
MW9-5-19-23-27'	27'	5/19/23	< 28	< 55	NA
Ecology MTCA Method A Soil Cleanup Levels for Unrestricted Land Use (mg/Kg)					
Unrestricted Land Use			2,000	2,000	30/100 [1]

Notes:

[1] MTCA Method A Cleanup Level for Unrestricted Land Use for TPH-G is 30 ppm if benzene is detected in subsurface soils or groundwater. If benzene is not detected, Cleanup Level is 100 ppm.

MTCA = Model Toxics Control Act

NA= Not Analyzed

ft bsg = feet below surface grade

mg/Kg = milligrams per Kilogram or parts per million (ppm)

BOLD = sample yielded detectable concentration of analyzed compound

TABLE 3

Soil Sample Results - Volatile Organic Compounds (mg/Kg)[1]

1201 South First Street

Yakima, Washington 98901

Sample I.D.	Depth (ft bsg)	Date Collected	Volatile Organic Compounds (VOCs) by EPA Method 8260D (mg/Kg)			
			Tetrachloroethene (PCE)	Trichloroethene (TCE)	(cis) 1,2-Dichloroethene [(cis) 1,2-DCE]	Vinyl Chloride (VC)
MONITORING WELL INSTATLATION (BMEC) - MAY 2023						
MW3a-5-19-23-20'	20'	5/19/23	< 0.0013	< 0.0013	< 0.0013	< 0.0013
MW3a-5-19-23-30'	30'	5/19/23	< 0.00095	< 0.00095	< 0.00095	< 0.00095
MW7-5-19-23-18'	18'	5/19/23	< 0.0011	< 0.0011	< 0.0011	< 0.0011
MW7-5-19-23-25'	25'	5/19/23	**0.0018**	< 0.00096	< 0.00096	< 0.00096
MW8-5-19-23-18'	18'	5/19/23	< 0.0012	< 0.0012	< 0.0012	< 0.0012
MW8-5-19-23-25'	25'	5/19/23	< 0.00095	< 0.00095	< 0.00095	< 0.00095
MW9-5-19-23-18'	18'	5/19/23	**0.00099**	< 0.00078	< 0.00078	< 0.00078
MW9-5-19-23-27'	27'	5/19/23	**0.0026**	< 0.0012	< 0.0012	< 0.0012
Ecology MTCA Method A Soil Cleanup Levels for Unrestricted Land Use (mg/Kg)						
Unrestricted Land Use			0.05	0.03	DNE	DNE

Notes:

MTCA = Model Toxics Control Act

NA = Not Analyzed

DNE = Does Not Exist

ft bsg = feet below surface grade

mg/Kg = milligrams per Kilogram or parts per million (ppm)

BOLD = sample yielded detectable concentration of analyzed compound

TABLE 4

Soil Sample Results - Total Metals (mg/Kg)[1]
Hahn Motors Company - 1201 South First Street
Yakima, Washington 98901

Sample I.D.	Depth (ft bsg)	Date Collected	Total Metals via EPA Methods 6010D/7471B							
			Arsenic	Barium	Cadmium	Chromium[3]	Mercury[4]	Lead	Selenium	Silver
BMEC SUBSURFACE INVESTIGATION - FEBRUARY 2022										
SB1-2-1-22-5'	5'	2/1/22	< 10	**30**	< 0.52	**7.9**	< 0.26	< 5.2	< 10	< 1.0
SB1-2-1-22-10'	10'	2/1/22	< 11	**61**	**2.5**	**12**	< 0.27	**45**	< 11	< 1.1
SB1-2-1-22-15'	15'	2/1/22	< 11	**45**	< 0.54	**5.4**	< 0.27	< 5.4	< 11	< 1.1
SB2-2-1-22-5'	5'	2/1/22	< 10	**72**	< 0.52	**34**	< 0.26	< 5.2	< 10	< 1.0
SB2-2-1-22-10'	10'	2/1/22	< 11	**27**	< 0.53	**5.5**	< 0.26	< 5.3	< 11	< 1.1
SB2-2-1-22-15'	15'	2/1/22	< 10	**32**	< 0.52	**6.4**	< 0.26	**31**	< 10	< 1.0
SB3-2-1-22-5'	5'	2/1/22	< 10	**28**	< 0.52	**5.8**	< 0.26	< 5.2	< 10	< 1.0
SB3-2-1-22-10'	10'	2/1/22	< 11	**27**	< 0.53	**4.5**	< 0.26	< 5.3	< 11	< 1.1
SB3-2-1-22-25'	25'	2/1/22	< 11	**73**	< 0.56	**5.8**	< 0.28	< 5.6	< 11	< 1.1
SB4-2-1-22-5'	5'	2/1/22	< 10	**47**	< 0.51	**7.8**	< 0.25	< 5.1	< 10	< 1.0
SB4-2-1-22-10'	10'	2/1/22	< 10	**41**	< 0.52	**7.9**	< 0.26	< 5.2	< 10	< 1.0
SB4-2-1-22-15'	15'	2/1/22	< 11	**31**	< 0.53	**6.4**	< 0.27	< 5.3	< 11	< 1.0
SB4-2-1-22-20'	20'	2/1/22	< 11	**36**	< 0.54	**6.1**	< 0.27	< 5.4	< 11	< 1.1
SB5-2-1-22-5'	5'	2/1/22	< 10	**39**	< 0.51	**7.4**	< 0.26	< 5.1	< 10	< 1.0
SB5-2-1-22-10'	10'	2/1/22	< 11	**24**	< 0.53	**5.2**	< 0.26	**9.4**	< 11	< 1.1
SB5-2-1-22-15'	15'	2/1/22	< 12	**66**	< 0.58	**4.3**	< 0.29	< 5.8	< 12	< 1.2
SB5-2-1-22-20'	20'	2/1/22	< 12	**79**	< 0.58	**2.9**	< 0.29	< 5.8	< 12	< 1.2
SB6-2-1-22-5'	5'	2/1/22	< 11	**53**	< 0.53	**11**	< 0.27	**21**	< 11	< 1.1
SB6-2-1-22-10'	10'	2/1/22	< 10	**48**	< 0.52	**8.4**	< 0.26	< 5.2	< 10	< 1.0
SB6-2-1-22-15'	15'	2/1/22	< 10	**44**	< 0.52	**6.9**	< 0.26	< 5.2	< 10	< 1.0
SB6-2-1-22-20'	20'	2/1/22	< 11	**52**	< 0.53	**10**	< 0.26	< 5.3	< 11	< 1.1
BMEC ADDITIONAL SUBSURFACE INVESTIGATION - SEPTEMBER 2022										
MW1-9-28-22-10'	10'	9/28/22	< 10	**48**	< 0.51	**8.6**	< 0.26	< 5.1	< 10	< 1.0
MW1-9-28-22-19'	19'	9/28/22	< 11	**56**	< 0.54	**16**	< 0.27	< 5.4	< 11	< 1.1
MW2-9-28-22-13'	13'	9/28/22	< 10	**46**	< 0.52	**11**	< 0.26	**9.2**	< 10	< 1.0
MW2-9-28-22-18'	18'	9/28/22	< 11	**45**	< 0.55	**15**	< 0.27	< 5.5	< 11	< 1.1
MW3-9-27-22-15'	15'	9/27/22	< 11	**44**	< 0.53	**6.9**	< 0.26	< 5.3	< 11	< 1.1
MW3-9-27-22-23'	23'	9/27/22	< 11	**41**	< 0.54	**7.1**	< 0.27	< 5.4	< 11	< 1.1
MW4-9-27-22-16'	16'	9/27/22	< 10	**46**	< 0.52	**8.1**	< 0.26	**5.9**	< 10	< 1.0
MW4-9-27-22-20'	20'	9/27/22	< 11	**30**	< 0.53	**5.8**	< 0.26	< 5.3	< 11	< 1.1
MW5-9-27-22-15'	15'	9/27/22	< 10	**45**	< 0.51	**9.2**	< 0.26	< 5.1	< 10	< 1.0
MW5-9-27-22-20'	20'	9/27/22	< 11	**53**	< 0.54	**13**	< 0.27	< 5.4	< 11	< 1.1
MW6-9-27-22-15'	15'	9/27/22	< 10	**34**	< 0.51	**9.1**	< 0.26	< 5.1	< 10	< 1.0
MW6-9-27-22-21'	21'	9/27/22	< 10	**65**	< 0.51	**9.5**	< 0.26	**11**	< 10	< 1.0
MONITORING WELL INSTALLATION (BMEC) - MAY 2023										
MW3a-5-19-23-20'	20'	5/19/23	< 11	**53**	< 0.53	**5.4**	< 0.26	< 5.3	< 11	< 1.1
MW3a-5-19-23-30'	30'	5/19/23	< 11	**59**	< 0.55	**6.0**	< 0.28	< 5.5	< 11	< 1.1
MW7-5-19-23-18'	18'	5/19/23	< 11	**26**	< 0.53	**6.2**	< 0.27	< 5.3	< 11	< 1.1
MW7-5-19-23-25'	25'	5/19/23	< 11	**32**	< 0.54	**6.9**	< 0.27	< 5.4	< 11	< 1.1
MW8-5-19-23-18'	18'	5/19/23	< 11	**47**	< 0.54	**8.8**	< 0.27	< 5.4	< 11	< 1.1
MW8-5-19-23-25'	25'	5/19/23	< 11	**28**	< 0.55	**8.8**	**0.38**	< 5.5	< 11	< 1.1
MW9-5-19-23-18'	18'	5/19/23	< 10	**56**	< 0.52	**6.1**	< 0.26	< 5.2	< 10	< 1.0
MW9-5-19-23-27'	27'	5/19/23	< 12	**67**	< 0.58	**12**	< 0.29	< 5.8	< 12	< 1.2
Ecology MTCA Method A Soil Cleanup Levels for Unrestricted Land Use (mg/Kg)										
Unrestricted Land Use			20	DNE	2	19	2	250	DNE	DNE

Notes:

[1] Table 2 contains total metal analysis results for all soil samples collected by Waste Watch. The 2009 metals results for soil samples collected by Ecology and Environment are included in tables located in Appendix D.

[2] Sample analysis performed past method-specified holding time per client's approval.

[3] MTCA Method A Cleanup Level for Unrestricted Land Use for Chromium VI. Cleanup Level for Chromium III is 2,000 mg/Kg.

[4] Mercury analyzed via EPA Method 7471A.

[5] Soil sample SB24-7.5 was also analyzed for hexavalent chromium via EPA Method 7196A and yielded a non-detect (< 1.2 mg/Kg).

MTCA = Model Toxics Control Act

NA = Not Analyzed

DNE = Does Not Exist

ft bsg = feet below surface grade

mg/Kg = milligrams per Kilogram or parts per million (ppm)

BOLD = sample yielded detectable concentration of analyzed compound

BOLD sample yielded detectable concentration of analyzed compound at levels exceeding MTCA Method A Cleanup levels for Unrestricted Land Use

TABLE 5

Groundwater Sample Results - Total Petroleum Hydrocarbons (µg/L)

1201 South First Street

Yakima, Washington 98901

Sample I.D.	Date Collected	TPH-Diesel and Heavy Oil by Northwest Method NWTPH-Dx		TPH-Gasoline by Northwest Method NWTPH-Gx
		TPH-D	TPH-O	
MONITORING WELLS				
MW1	10/3/22	< 200	< 200	< 100
	12/15/22	< 210	< 210	< 500
	3/28/23	< 150	< 150	NA
	6/13/23	< 210	< 210	NA
MW2	10/3/22	< 210	< 210	< 100
	12/15/22	< 220	**240**	< 500
	3/28/23	< 150	**150**	NA
	6/13/23	< 210	< 210	NA
MW3	10/3/22	< 200	< 200	< 100
	12/15/22	< 230	< 230	< 500
	3/28/23	< 220	< 220	NA
MW3A	6/13/23	< 210	< 210	NA
MW4	10/3/22	< 210	< 210	< 100
	12/15/22	< 230	< 230	< 500
	3/28/23	< 150	< 150	NA
	6/13/23	< 210	< 210	NA
MW5	103/22	< 210	< 210	< 100
	12/15/22	< 220	< 220	< 500
	3/28/23	< 150	< 150	NA
	6/13/23	< 210	< 210	NA
MW6	10/3/22	< 210	< 210	< 100
	12/15/22	< 220	< 220	< 500
	3/28/23	< 150	< 150	NA
	6/13/23	< 210	< 210	NA
MW7	6/13/23	< 210	< 210	NA
MW8	6/13/23	< 220	< 220	NA
MW9	6/13/23	< 210	< 210	NA
Ecology MTCA Method A Groundwater Cleanup Levels (µg/L)				
Cleanup Level		500	500	800/1,000 [1]

Notes:

[1] MTCA Method A Cleanup Level for TPH-G is 800 ppb if benzene is detected in subsurface soils or groundwater. If benzene is not detected, Cleanup Level is 1,000 ppb.

MTCA = Model Toxics Control Act

µg/L = micrograms per Liter or parts per billion (ppb)

BOLD = sample yielded detectable concentration of analyzed compound.

BOLD Concentration exceeds the MTCA Method A Cleanup Level.

TABLE 6

Groundwater Sample Results - Volatile Organic Compounds (µg/L)
Hahn Motors Company - 1201 South 1st Street
Yakima, Washington 98901

Sample I.D.	Date Collected	Volatile Organic Compounds (VOCs) by EPA Method 8260D (µg/L)																				
		Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	EDC	2-Hexanone	n-Propyl-benzene	MTBE	Naphthalene	124-TMB	135-TMB	p-Isopropyltoluene	n-Butylbenzene	Acetone	Carbon Disulfide	2-Butanone	Chloroform	Vinyl Chloride	(cis) 1,2-Dichloroethene	Trichloroethene (TCE)	(PCE)
MONITORING WELLS																							
MW1	10/3/22	< 0.20	< 1.0	< 0.20	< 0.60	< 0.010	< 0.20	< 2.0	< 0.20	< 0.20	< 1.3	< 0.20	< 0.20	< 0.20	< 0.20	< 5.0	< 0.20	< 5.0	**6.1**	< 0.20	< 0.20	< 0.20	**2.4**
	12/15/22	< 0.20	< 1.0	< 0.20	< 0.60	< 0.010	< 0.20	< 2.0	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 5.0	< 0.26	< 5.0	< 1.0	< 0.20	< 0.20	< 0.20	**1.7**
	3/28/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.8**
	6/13/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.4**
MW2	10/3/22	**0.62**	< 1.0	**0.44**	**0.45**	< 0.010	< 0.20	< 2.0	**0.30**	< 0.20	< 1.3	< 0.20	< 0.20	< 0.20	< 0.20	< 5.0	< 0.20	< 5.0	**5.0**	< 0.20	< 0.20	< 0.20	**2.6**
	12/15/22	**0.22**	< 1.0	< 0.20	< 0.60	< 0.010	< 0.20	< 2.0	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	**0.31**	**0.21**	< 5.0	**0.33**	< 5.0	< 1.0	< 0.20	< 0.20	< 0.20	**1.7**
	3/28/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**2.4**
	6/13/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**2.3**
MW3	10/3/22	< 0.20	< 1.0	< 0.20	< 0.60	< 0.010	< 0.20	< 2.0	< 0.20	< 0.20	< 1.3	< 0.20	< 0.20	< 0.20	< 0.20	< 5.0	< 0.20	< 5.0	**4.8**	< 0.20	< 0.20	< 0.20	**2.2**
	12/15/22	< 0.20	< 1.0	< 0.20	< 0.60	< 0.010	< 0.20	< 2.0	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 5.0	< 0.26	< 5.0	**2.7**	< 0.20	< 0.20	< 0.20	**1.4**
	3/28/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**0.70**
MW3A	6/13/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.3**
MW4	10/3/22	**0.67**	< 1.0	**0.22**	**0.26**	< 0.010	< 0.20	< 2.0	< 0.20	< 0.20	< 1.3	< 0.20	< 0.20	< 0.20	< 0.20	**5.2**	**0.23**	< 5.0	**3.6**	< 0.20	< 0.20	< 0.20	**1.1**
	12/15/22	**0.23**	< 1.0	< 0.20	< 0.60	< 0.010	< 0.20	< 2.0	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 5.0	**0.36**	< 5.0	**2.5**	< 0.20	< 0.20	< 0.20	**1.1**
	3/28/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.3**
	6/13/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**0.97**
MW5	10/3/22	**1.7**	**2.2**	**0.68**	**1.45**	< 0.010	< 0.20	**2.3**	**0.34**	< 0.20	< 1.3	**0.25**	< 0.20	**0.30**	**0.25**	**11**	< 0.20	< 5.0	**5.6**	< 0.20	< 0.20	< 0.20	**1.6**
	12/15/22	< 0.20	**< 1.0**	< 0.20	< 0.60	< 0.010	< 0.20	< 2.0	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 5.0	**0.34**	< 5.0	**2.6**	< 0.20	< 0.20	< 0.20	**1.6**
	3/28/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.5**
	6/13/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.3**
MW6	10/3/22	**0.65**	**1.0**	**0.26**	**0.24**	< 0.010	< 0.20	< 2.0	< 0.20	< 0.20	< 1.3	< 0.20	< 0.20	< 0.20	< 0.20	< 5.0	< 0.20	< 5.0	**4.5**	< 0.20	< 0.20	< 0.20	**1.5**
	12/15/22	< 0.20	< 1.0	< 0.20	< 1.0	< 0.010	< 0.20	< 2.0	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 5.0	< 0.26	< 5.0	**2.9**	< 0.20	< 0.20	< 0.20	**1.3**
	3/28/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.1**
	6/13/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.1**
MW7	6/13/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.3**
MW8	6/13/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.2**
MW9	6/13/23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.20	< 0.20	< 0.20	**1.1**
Ecology MTCA Method A Groundwater Cleanup Levels (µg/L)																							
Cleanup Level		5	1,000	700	1,000	0.010	5	DNE	DNE	20	160	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	0.2	DNE	5	5

Notes:
MTCA = Model Toxics Control Act
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
MTBE = Methyl tertiery-butyl ether
124-TMB = 1,2,4-trimethylbenzene
135-TMB = 1,3,5-trimethylbenzene
PCE = Tetrachloroethylene
DNE = Does Not Exist
µg/L = micrograms per Liter or parts per billion (ppb)
BOLD = sample yielded detectable concentration of analyzed compound.

TABLE 7

Groundwater Sample Results - Total Metals (µg/L)

1201 South First Street

Yakima, Washington 98901

Sample I.D.	Date Collected	Total Mercury by EPA Method 200.8 (µg/L)	Total Metals via EPA Method 200.8						
			Arsenic	Barium	Cadmium	Chromium[1]	Lead	Selenium	Silver
Monitoring Wells									
MW1	10/3/22	< 0.50	**12**	**340**	< 4.4	**110**	**16**	< 5.6	< 11
	12/15/22	< 0.50	**28**	**580**	< 4.4	**150**	**26**	< 5.6	< 11
	3/28/23	< 0.50	< 3.3	NA	< 4.4	**15**	**2.5**	NA	NA
	6/13/23	< 0.50	**9.3**	NA	< 4.4	**73**	**11**	NA	NA
MW2	10/3/22	**1.2**	**58**	**2400**	< 4.4	**430**	**160**	**7.6**	< 11
	12/15/22	**0.58**	**34**	**1300**	< 4.4	**210**	**75**	< 5.6	< 11
	3/28/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
	6/13/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
MW3	10/3/22	< 0.50	**16**	**550**	< 4.4	**120**	**27**	< 5.6	< 11
	12/15/22	< 0.50	**43**	**1100**	< 4.4	**340**	**73**	**6.7**	< 11
	3/28/23	**1.5**	**88**	NA	**6.5**	**1100**	**220**	NA	NA
MW3A	6/13/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
MW4	10/3/22	**1.5**	**67**	**2700**	< 4.4	**400**	**110**	**9.9**	< 11
	12/15/22	**1.3**	**66**	**1900**	< 4.4	**320**	**77**	**7.1**	< 11
	3/28/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
	6/13/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
MW5	10/3/22	< 0.50	**18**	**790**	< 4.4	**210**	**36**	< 5.6	< 11
	12/15/22	< 0.50	**28**	**690**	< 4.4	**180**	**38**	< 5.6	< 11
	3/28/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
	6/13/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
MW6	10/3/22	**0.61**	**39**	**600**	< 4.4	**81**	**39**	**5.9**	< 11
	12/15/22	**2.1**	**150**	**1900**	< 4.4	**330**	**140**	**11**	< 11
	3/28/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
	6/13/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
MW7	6/13/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
MW8	6/13/23	< 0.50	< 3.3	NA	< 4.4	< 11	**1.1**	NA	NA
MW9	6/13/23	< 0.50	< 3.3	NA	< 4.4	< 11	< 1.1	NA	NA
Ecology MTCA Method A Groundwater Cleanup Levels (µg/L)									
Cleanup Levels		2	5	DNE	5	50	15	DNE	DNE

Notes:

[1] MTCA Method A Cleanup Level for total chromium (chromium VI + chromium III) is 50 µg/L

MTCA = Model Toxics Control Act

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

MTBE = Mehtyl tertiery-butyl ether

124-TMB = 1,2,4-trimethylbenzene

135-TMB = 1,3,5-trimethylbenzene

DNE = Does Not Exist

µg/L = micrograms per Liter or parts per billion (ppb)

BOLD = sample yielded detectable concentration of analyzed compound

BOLD Concentration exceeds the MTCA Method A Cleanup Level

APPENDIX A

MARCH 14, 2023 DEPARTMENT OF ECOLOGY OPINION LETTER

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Central Region Office
1250 West Alder St., Union Gap, WA 98903-0009 • 509-575-2490

March 14, 2023

Debra Manjarrez
Manjarrez & De Leon Inc, PS
2010 W. Nob Hill Blvd., Suite 1
Yakima, WA 98902

Re: Opinion on Proposed Cleanup of the Following Site:

- **Site Name:** Hahn Motor Company
- **Site Address:** 1201 S. 1st Street, Yakima
- **Facility/Site ID:** 502
- **Cleanup Site ID:** 4927
- **VCP Project No.:** CE0529

Dear Debra Manjarrez:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of the Hahn Motor Company facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70A.305 RCW.[1]

Issue Presented and Opinion

Upon completion of the proposed cleanup, will further remedial action likely be necessary to clean up contamination at the Site?

> **YES. Ecology has determined that, upon completion of your proposed cleanup, further remedial action will likely be necessary to clean up contamination at the Site.**

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70A.305 RCW, and its implementing regulations, Chapter 173-340 WAC[2] (collectively "substantive requirements of MTCA"). The analysis is provided below.

[1] https://app.leg.wa.gov/rcw/default.aspx?cite=70A.305
[2] https://apps.leg.wa.gov/wac/default.aspx?cite=173-340

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following releases:

- Tetrachloroethylene (PCE) into the soil and groundwater.
- Diesel and Heavy Oil into the soil and groundwater.
- Metals into the soil and groundwater.

Please note the Site is a known sub-facility of the Yakima Railroad facility (# 500). The Yakima Railroad's comingled plume comprises of a number of sub-facilities along the Yakima Railroad Corridor. Each sub-facility must demonstrate that site soils meet appropriate MTCA cleanup levels or removed to the greatest extent practicable and are no longer contributing to the areawide PCE contamination. Vapor Intrusion is a concern that must also be considered as part of any long-term remediation of sites within the Yakima Railroad plume. The remainder of this opinion does not apply to Yakima Railroad facility, or the other Sub-facilities associated with the Yakima Railroad facility.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Blue Mountain Environmental and Consulting Company, Inc., December 2022 Groundwater Sampling Event Report, January 27, 2023.[3]

2. Blue Mountain Environmental and Consulting Company, Inc., September 2022 Additional Subsurface Investigation Report, October 17, 2022.[4]

3. Blue Mountain Environmental and Consulting Company, Inc., Drywell Decommissioning and Contaminated Soil Removal Report, July 28, 2022.[5]

4. Blue Mountain environmental and Consulting Company, Inc., February 1, 2022 Subsurface Investigation Report, March 4, 2022.[6]

5. State of Washington Department of Ecology, Further Action Letter, February 23, 2016.[7]

[3] https://apps.ecology.wa.gov/cleanupsearch/document/122389
[4] https://apps.ecology.wa.gov/cleanupsearch/document/118102
[5] https://apps.ecology.wa.gov/cleanupsearch/document/114972
[6] https://apps.ecology.wa.gov/cleanupsearch/document/111174
[7] https://apps.ecology.wa.gov/cleanupsearch/document/53701

6. PETCO Incorporated, Underground Storage Tank Decommissioning & Site Assessment Report For UST Site #200130 Yakima, Washington, February 2008.[8]

7. PLSA Engineering & Surveying, Letter regarding land farming sampling, June 29, 1992.[9]

8. Hahn Motor Company Site Hazard Assessment, March 12, 1991.[10]

9. Earth Consultants, Inc., Preliminary Integrity Assessment of Two Underground Storage Tanks (UST)s and Three Industrial Waste Water Sumps, October 25, 1989.[11]

A number of these documents are accessible in electronic form from the Site webpage.[12] The complete records are stored at the Central Regional Office of Ecology (CRO) for review by appointment only. Visit our Public Records Request page[13] to submit a public records request or get more information about the process. If you require assistance with this process, you may contact the Public Records Officer at publicrecordsofficer@ecy.wa.gov or 509-575-2490.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that, upon completion of your proposed cleanup, **further remedial action** will likely be necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is not sufficient to establish cleanup standards and select a cleanup action.

Cleanup standards cannot be established until the nature of contamination is characterized. It is possible the metals found within the groundwater are not representative of Site contamination. Site samples indicate elevated concentrations of metals across the site.

Elevated metal concentrations maybe explained by water turbidity. It would be prudent to collect turbidity readings going forward along with both unfiltered and filtered samples.

[8] https://apps.ecology.wa.gov/cleanupsearch/document/4485
[9] https://apps.ecology.wa.gov/cleanupsearch/document/4481
[10] https://apps.ecology.wa.gov/cleanupsearch/document/4484
[11] https://apps.ecology.wa.gov/cleanupsearch/document/4482
[12] https://apps.ecology.wa.gov/cleanupsearch/site/4927
[13] https://ecology.wa.gov/publicrecords

Sometimes filtered samples have lower concentrations as the metal particulates get removed leaving only the metals that have solubilized.

It is also possible further assessment is necessary to determine groundwater Cleanup standards for metals. MTCA allows for the establishment of background Cleanup Levels as long as sufficient evidence is provided to determine their use. If further characterization is necessary additional wells and researching the metals concentrations of other sites within the area could prove necessary.

As the Site is a sub-facility of the Yakima Railroad facility (#500), it is important to demonstrate that site soils meet MTCA PCE cleanup standards. PCE and its degradation products must be below cleanup levels or removed to the greatest extent practicable. The Site must also demonstrate that it no longer is contributing to the areawide PCE plume. Contribution to the areawide PCE groundwater plume is defined by the concentration of PCE and its degradation products entering and leaving the Site. PCE degradation products are trichloroethylene (TCE), cis-1,2-dichloroethylene (Cis-DCE), and vinyl chloride (VC).

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance currently documented in the December 2022 Groundwater Sampling Event Report and the September 2022 Additional Subsurface Investigation Report meet the substantive requirements of MTCA. However, they don't sufficiently capture all contaminants of concern. The degradation products of PCE must also be considered.

The MTCA Method A Cleanup Levels for unrestricted land uses (soil) and beneficial water uses (groundwater) are:

Contaminant	Soil Cleanup Levels (mg/Kg)	Groundwater Cleanup Levels (µg/L)
Diesel	2,000	500
Heavy Oil	2,000	500
PCE	0.05	5
Arsenic	20	5
Cadmium	2	5
Chromium	19	50
Lead	250	15
Mercury	2	2

*Metal Cleanup Levels maybe subject to further evaluation depending on additional investigation.

The MTCA Method A Cleanup Levels for PCE's degradation products in groundwater are:

Contaminant	Groundwater Cleanup Levels (µg/L)
TCE	5
Cis-DCE	70
VC	0.2

A standard point of compliance (POC) was selected for both soil and groundwater on the Site. Standard POC for soil, based on direct contact for unrestricted land use, is defined as throughout the Site from the ground surface to 15 feet below the ground surface. The standard POC for Groundwater, based on drinking water beneficial use, is defined as throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth that could potentially be affected by the Site.

3. Selection of cleanup action.

Further investigation is required to determine if or what additional cleanup action is necessary. Investigation into the elevated metal concentrations and the nature of what is causing the elevated groundwater concentrations of metals is essential to determine what or if further remedial action is needed. It must also be demonstrated that the Site is no longer contributing to the greater Yakima Railroad facility PCE groundwater plume. These data gaps must be known prior to selecting a cleanup action for the Site.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly, and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70A.305.040(4).[14]

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-

[14] https://app.leg.wa.gov/rcw/default.aspx?cite=70A.305.040

supervised action. This opinion does not determine whether the action you proposed will be substantially equivalent. Courts make that determination. *See* RCW 70A.305.080[15] and WAC 173-340-545.[16]

3. **Opinion is limited to proposed cleanup.**

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Site upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the VCP.

4. **State is immune from liability.**

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70A.305.170.[17]

Contact Information

Thank you for choosing to clean up your site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may resubmit your proposal for our review. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our VCP webpage.[18] If you have any questions about this opinion, please contact me by phone at 509-406-6959 or by email at Kyle.Parker@ecy.wa.gov.

Sincerely,

Kyle Parker
Toxics Cleanup Program
Central Regional Office

Enclosures: A – Description and Diagram of the Site

cc: Peter Trabusiner, BMEC Company

[15] https://app.leg.wa.gov/rcw/default.aspx?cite=70A.305.080
[16] https://app.leg.wa.gov/wac/default.aspx?cite=173-340-545
[17] https://app.leg.wa.gov/rcw/default.aspx?cite=70A.305
[18] www.ecy.wa.gov/vcp

Enclosure A

Description and Diagram of the Site

Site Diagram

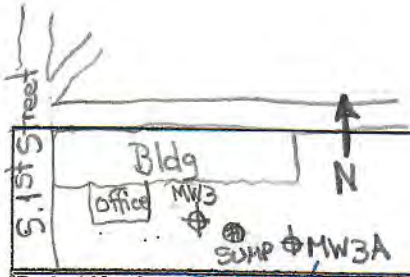
Site Description

Hahn Motor Company facility (Site) is located on the southeast corner of South 1st Street and East Arlington Street in the city of Yakima, Washington. The Site historically had a heating oil tank which was converted to a waste oil tank after it was no longer used for its intended original use. A second waste oil tank was also installed at the site. The diesel, heavy oil, and tetrachloroethylene (PCE) contamination at the site is believed to be released from those tanks and potentially form the maintenance shop for the auto dealer. The nature and extent of metals found within the groundwater is still under investigation. Diesel, heavy oil, and PCE were released to soil and migrated to groundwater. PCE and its degradation products poses a potential vapor intrusion threat at the Site and therefore is a potential pathway to exposure for workers within the structure. As most of the site is covered with cement or asphalt contact to soils is unlikely unless soil disturbance occurs. Contaminated sites are defined by their release(s) and where contamination associated with the release(s) has come to be located. The Site as currently known to Ecology is located within the property of the original release, as shown in the Site Diagram.

BMEC **P.O. Box 545/125 Main Street** **Waitsburg, Washington 99361**	**FIGURE 2 – SITE LOCATION MAP**	**Hahn Motors Company** **1201 South 1st Street** **Yakima, Washington 98901**

APPENDIX B

BORING LOGS

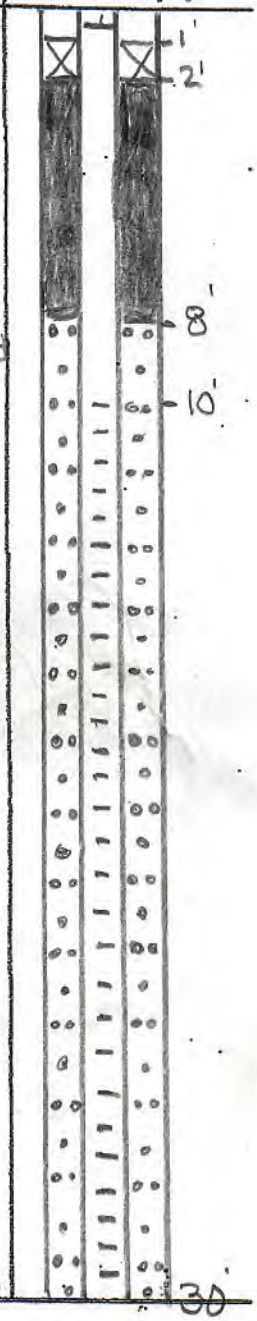


BORING/WELL CONSTRUCTION LOG

Project Number	E2023/0407
Project Name	Additional SI - May 2023
Location	1201 S. 1st Street, Yakima, WA 98901
Drilling Method	Terra Sonic
Sampling Method	Core Barrel / Sample Bag (Continuous)
Ground Elevation	
Top of Casing Elevation	
Logged by	Brent Bergeron, LHG
Remarks	
Boring/Well Number	MW-3A
Date Drilled	5/18/23
Casing Type/Diameter	6" OD
Screen Type/Slot	Schedule 40 PVC/0.010" PVC 2" dia
Gravel Pack Type	Silica Sand
Grout Type	Bentonite
Depth to Water/Date	19.00' btoc 6/13/23
Ground Water Elevation/Date	
Drilling Co.	Anderson Environmental Contracting (AEC)

PID (ppm)	Blow Counts	Recovery (%)	Sampling Method	Sample	Depth (ft. BGL)	U.S.C.S	Graphic Log	Lithologic Description	Contact Depth
1	NA	20			5			NO RECOVERY	5.0
0.5					10			8-10': Brown, coarse gravelly SAND, some silt, well rounded, loose, dry	10.0
0.5					15			10-20': Brown-gray, SAND & GRAVEL, coarse, well-rounded, loose, dry	15.0
0.2					20				20.0
0.2				X	25			20-30': Brown SAND, little coarse, well-rounded gravel, little silt, little clay, Wet to V. Wet, loose	25.0
0.1					30				30.0
0				X					

Well Diagram MW3A



TD = 30'

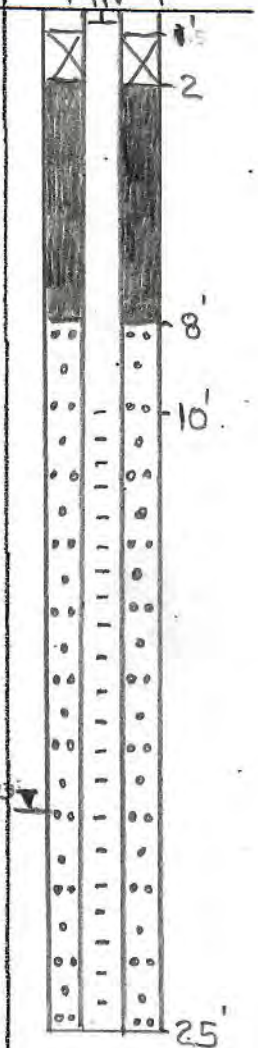
20' 1445
30' 1450

BORING/WELL CONSTRUCTION LOG

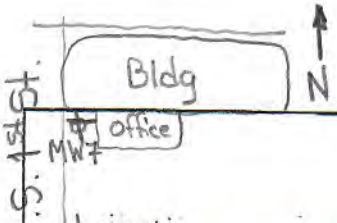
Project Number	E2023/0407
Project Name	Additional SI - May 2023
Location	1201 S. 1st Street, Yakima, WA 98901
Drilling Method	Terra Sonic
Sampling Method	Core Barrel / Sample Bag (Continuous)
Ground Elevation	
Top of Casing Elevation	
Logged by	Brent Bergeron, LHG
Remarks	
Boring/Well Number	MW-7
Date Drilled	5/19/23
Casing Type/Diameter	6" OD
Screen Type/Slot	Schedule 40 PVC / 0.010" PVC 2" dia
Gravel Pack Type	Silica Sand
Grout Type	Bentonite
Depth to Water/Date	19.17' btoc 6/13/23
Ground Water Elevation/Date	
Drilling Co.	Anderson Environmental Contracting (AEC)

PID (ppm)	Blow Counts	Recovery (%)	Sampling Method	Sample	Depth (ft. BGL.)	U.S.C.S	Graphic Log	Lithologic Description	Contact Depth
0.4	NA	100				ML		0-2": Asphalt	
0.1								2"-2.5': Brown SILT, trace gravel, trace v. fine sand, firm, moist.	
0.1						GP		2.5-10': Gray, Sandy, coarse GRAVEL & COBBLES, well-rounded, little silt, dry, loose	
0					5				5.0
0									
0.1						GP			
0									
0									
0.4					10				10.0
0.4		100				GP		10-12': SAA	
0.3						SP/GP		12-20': Brown, SAND & GRAVEL, coarse, well-rounded, little cobbles, loose, Wet @ 18'	
0					15				15.0
0									
0						SP/GP			
0	MW7-5/19/23-18'			X	20				6/13/23 ▼ 20.0
0		100				SP/GP		20-21.5': SAA	
0								21.5-25': Gray-brown, sandy, coarse GRAVEL, little cobbles, saturated, loose.	
0						GP			
0					25				25.0
	MW7-5/19/23-25'			X				TD=25'	
					30				30.0

Well Diagram



0900 18'
0905 25'

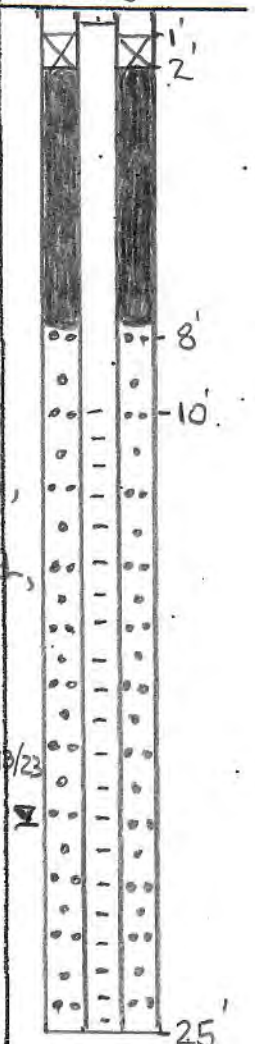


BORING/WELL CONSTRUCTION LOG

Project Number E2023/0407	Boring/Well Number MW 8
Project Name Additional SI - May 2023	Date Drilled 5/19/23
Location 1201 S. 1st Street, Yakima, WA 98901	Casing Type/Diameter 6" OD
Drilling Method Terra Sonic	Screen Type/Slot Schedule 40 PVC/0.010" PVC 2" dia
Sampling Method Core Barrel / Sample Bag (Continuous)	Gravel Pack Type Silica Sand
Ground Elevation	Grout Type Bentonite
Top of Casing Elevation	Depth to Water/Date 19.58 btoc 6/13/23
Logged by Brent Bergeron, LHG	Ground Water Elevation/Date
Remarks	Drilling Co. Anderson Environmental Contracting (AEC)

PID (ppm)	Blow Counts	Recovery (%)	Sampling Method	Sample	Depth (ft. BGL.)	U.S.C.S	Graphic Log	Lithologic Description	Contact Depth
0.5	NA	80				ML		0-3": Asphalt	
0.3								3"-1': Brown Silt, loose, damp, trace gravel	
0.4						GP		1-2.5': Brown silty, coarse GRAVEL, well-rounded.	
0.4					5			2.5-10': Brown-gray, sandy, coarse GRAVEL, little cobbles, well-rounded, trace	5.0
0.8								silt, loose, damp.	
0.3						GP			
0.3									
0.2					10				10.0
0.1		100						10-13': Brown-gray, silty, coarse GRAVEL, well-rounded, little cobbles, little fine sand, loose, damp.	
0.2						GP			
0.6								13-20': Brown-gray, sandy, coarse GRAVEL, well-rounded, little cobbles, little	
0.3					15				15.0
0.4								silt, damp, loose.	
0.2									
0.2						GP			
0.5				X					
0.2	MW8-5/19/23-18'								6/13/23
0.2					20				& COBBLES 20.0
0.1		100				GP		20-22': Brown, silty, coarse GRAVEL, well-rounded, little fine sand, loose, moist.	
0.9									
0.2						SP		22-25': Brown, gravelly SAND: coarse, well-rounded, trace cobbles, trace silt, V. wet, loose.	
0.1									
0.1				X	25				25.0
	MW8-5/19/23-25'							TD = 25'	
					30				30.0

Well Diagram MW 8



18' 1115
25' 1120

BORING/WELL CONSTRUCTION LOG

Project Number	E2023/0407	Boring/Well Number	MW9
Project Name	Additional SI - May 2023	Date Drilled	5/18/23
Location	1201 S. 1st Street, Yakima, WA 98901	Casing Type/Diameter	6" OD
Drilling Method	Terra Sonic	Screen Type/Slot	Schedule 40 PVC/0.010" PVC 2" dia
Sampling Method	Core Barrel / Sample Bag (Continuous)	Gravel Pack Type	Silica Sand
Ground Elevation		Grout Type	Bentonite
Top of Casing Elevation		Depth to Water/Date	19.32' btoc 6/13/23
Logged by	Brent Bergeron, LHG	Ground Water Elevation/Date	
Remarks		Drilling Co.	Anderson Environmental Contracting (AEC)

PID (ppm)	Blow Counts	Recovery (%)	Sampling Method	Sample	Depth (ft. BGL)	U.S.C.S	Graphic Log	Lithologic Description	Contact Depth	Well Diagram
1	NA	0			5			NO RECOVERY	5.0	MW9
		50			10				10.0	
					15				15.0	
0.3								15-18': Gray-brown, sandy, coarse GRAVEL, well-rounded, loose, damp to moist.		
0.5										
0.3										
0.2	MW9-5/19/23-18'			X				18-20': Brown SAND & GRAVEL, coarse, well-rounded, loose., wet @ 18'		
0.2					20				20.0	
0.1		100						20-26': Gray, pulverized, silty, coarse GRAVEL, dry, loose		
0.2										
0.1										
0.1									6/13/23	
0.1					25				25.0	
0								26-27': Brown, medium SAND, little cobble, wet		
0										
MW9-5/19/23-27'				X				TD = 27'		
					30				30.0	

18' 1315

27' 1320

APPENDIX C

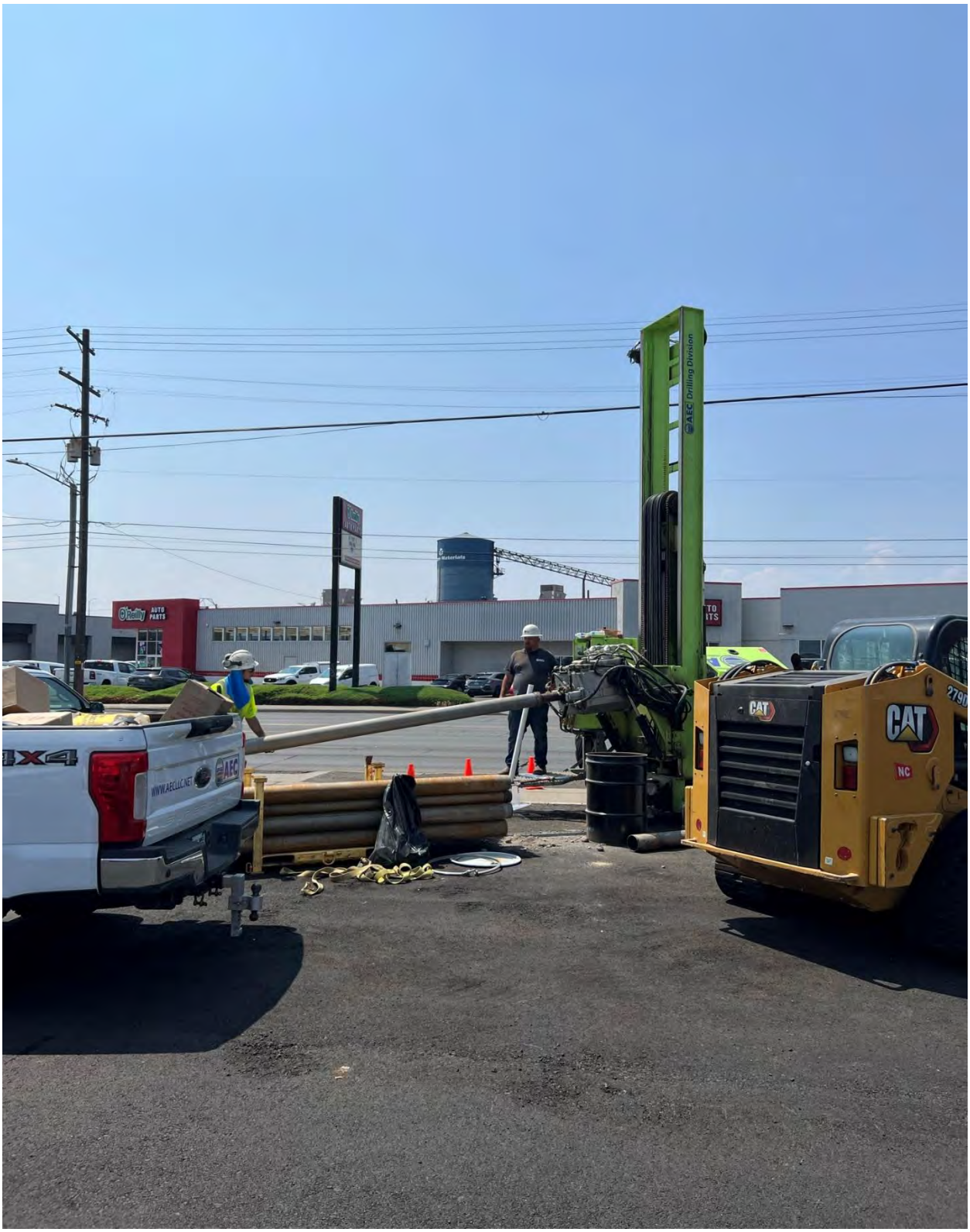
PHOTOGRAPHS

Photograph 1 – Terra sonic drilling rig set-up to advance boring MW7 on May 19, 2023 (facing NW).

Photograph 2 – Anderson Environmental Contracting (AEC) employee carrying a soil sample bag from the drill rig to the geologist's field table on May 19, 2023 (facing west).

Photograph 3 – Terra sonic drilling rig set-up to advance boring MW8 on May 19, 2023 (facing west).

Photograph 4 – Soil cuttings from boring MW8 on May 19, 2023.



Photograph 5 – Terra sonic drilling rig set-up to advance boring MW9 on May 19, 2023 (facing west).

Photograph 6 – Terra sonic drilling rig set-up to advance boring MW3A on May 19, 2023 (facing north).

Photograph 7 – View of former monitoring well MW3 (left) and dry well (center) installed in June 2022. Replacement well boring MW3A is located immediately beneath the core barrel (facing north).

Photograph 8 – Soil lithology from 1 – 20 feet bgs in boring MW3A on May 19, 2023 (facing NE). Ten feet of soil cuttings still in the ground.

Photograph 9 – BMEC employee collecting a soil sample from boring MW3A on May 19, 2023 (facing north).

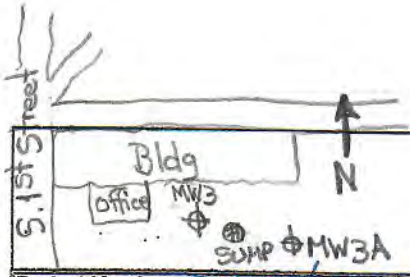
Photograph 10 – Purging groundwater from well MW4, prior to sample collection on June 13, 2023 (facing north).

Photograph 11 – View of the Horiba U-52 used to assess groundwater parameters in the field on June 13, 2023.

Photograph 12 – Purging groundwater from replacement well MW3A, prior to sample collection on June 13, 2023 (facing north).

APPENDIX D

GROUNDWATER SAMPLING FIELD DATA SHEETS

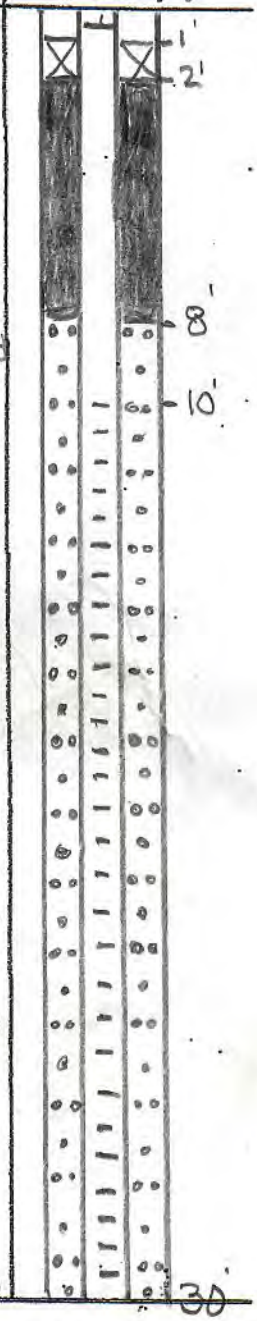


BORING/WELL CONSTRUCTION LOG

Project Number	E2023/0407
Project Name	Additional SI - May 2023
Location	1201 S. 1st Street, Yakima, WA 98901
Drilling Method	Terra Sonic
Sampling Method	Core Barrel / Sample Bag (Continuous)
Ground Elevation	
Top of Casing Elevation	
Logged by	Brent Bergeron, LHG
Remarks	
Boring/Well Number	MW-3A
Date Drilled	5/18/23
Casing Type/Diameter	6" OD
Screen Type/Slot	Schedule 40 PVC/0.010" PVC 2" dia
Gravel Pack Type	Silica Sand
Grout Type	Bentonite
Depth to Water/Date	19.00' btoc 6/13/23
Ground Water Elevation/Date	
Drilling Co.	Anderson Environmental Contracting (AEC)

PID (ppm)	Blow Counts	Recovery (%)	Sampling Method	Sample	Depth (ft. BGL)	U.S.C.S	Graphic Log	Lithologic Description	Contact Depth
1	NA	20			5			NO RECOVERY	5.0
0.5					10			8-10': Brown, coarse gravelly SAND, some silt, well rounded, loose, dry	10.0
0.5					15			10-20': Brown-gray, SAND & GRAVEL, coarse, well-rounded, loose, dry	15.0
0.2					20				20.0
0.2				X	25			20-30': Brown SAND, little coarse, well-rounded gravel, little silt, little clay, Wet to V. Wet, loose	25.0
0.1					30				30.0
0				X					

Well Diagram MW3A



TD = 30'

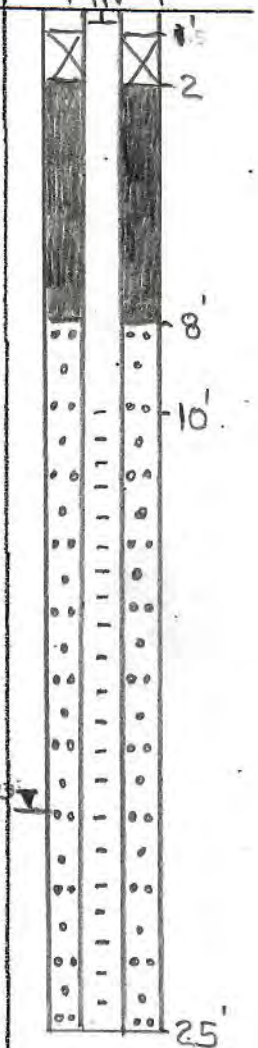
20' 1445
30' 1450

BORING/WELL CONSTRUCTION LOG

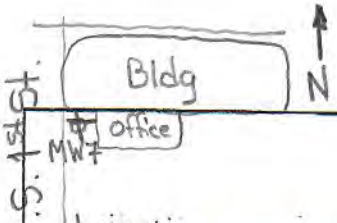
Project Number	E2023/0407
Project Name	Additional SI - May 2023
Location	1201 S. 1st Street, Yakima, WA 98901
Drilling Method	Terra Sonic
Sampling Method	Core Barrel / Sample Bag (Continuous)
Ground Elevation	
Top of Casing Elevation	
Logged by	Brent Bergeron, LHG
Remarks	
Boring/Well Number	MW-7
Date Drilled	5/19/23
Casing Type/Diameter	6" OD
Screen Type/Slot	Schedule 40 PVC / 0.010" PVC 2" dia
Gravel Pack Type	Silica Sand
Grout Type	Bentonite
Depth to Water/Date	19.17' btoc 6/13/23
Ground Water Elevation/Date	
Drilling Co.	Anderson Environmental Contracting (AEC)

PID (ppm)	Blow Counts	Recovery (%)	Sampling Method	Sample	Depth (ft. BGL.)	U.S.C.S	Graphic Log	Lithologic Description	Contact Depth
0.4	NA	100				ML		0-2": Asphalt	
0.1								2"-2.5': Brown SILT, trace gravel, trace v. fine sand, firm, moist.	
0.1						GP		2.5-10': Gray, Sandy, coarse GRAVEL & COBBLES, well-rounded, little silt, dry, loose	
0					5				5.0
0									
0.1						GP			
0									
0									
0.4					10				10.0
0.4		100				GP		10-12': SAA	
0.3						SP/GP		12-20': Brown, SAND & GRAVEL, coarse, well-rounded, little cobbles, loose, Wet @ 18'	
0					15				15.0
0									
0						SP/GP			
0	MW7-5/19/23-18'			X	20				6/13/23 ▼ 20.0
0		100				SP/GP		20-21.5': SAA	
0								21.5-25': Gray-brown, sandy, coarse GRAVEL, little cobbles, saturated, loose.	
0						GP			
0					25				25.0
	MW7-5/19/23-25'			X				TD=25'	
					30				30.0

Well Diagram



0900 18'
0905 25'

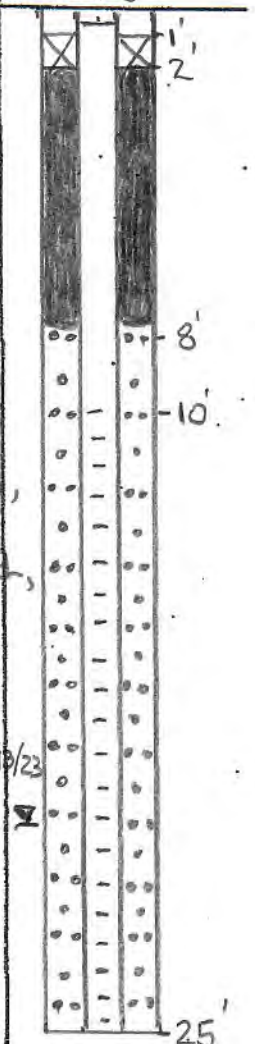


BORING/WELL CONSTRUCTION LOG

Project Number E2023/0407	Boring/Well Number MW 8
Project Name Additional SI - May 2023	Date Drilled 5/19/23
Location 1201 S. 1st Street, Yakima, WA 98901	Casing Type/Diameter 6" OD
Drilling Method Terra Sonic	Screen Type/Slot Schedule 40 PVC/0.010" PVC 2" dia
Sampling Method Core Barrel / Sample Bag (Continuous)	Gravel Pack Type Silica Sand
Ground Elevation	Grout Type Bentonite
Top of Casing Elevation	Depth to Water/Date 19.58 btoc 6/13/23
Logged by Brent Bergeron, LHG	Ground Water Elevation/Date
Remarks	Drilling Co. Anderson Environmental Contracting (AEC)

PID (ppm)	Blow Counts	Recovery (%)	Sampling Method	Sample	Depth (ft. BGL.)	U.S.C.S	Graphic Log	Lithologic Description	Contact Depth
0.5	NA	80				ML		0-3": Asphalt	
0.3								3"-1': Brown Silt, loose, damp, trace gravel	
0.4						GP		1-2.5': Brown silty, coarse GRAVEL, well-rounded.	
0.4					5			2.5-10': Brown-gray, sandy, coarse GRAVEL, little cobbles, well-rounded, trace	5.0
0.8								silt, loose, damp.	
0.3						GP			
0.3									
0.2					10				10.0
0.1		100						10-13': Brown-gray, silty, coarse GRAVEL, well-rounded, little cobbles, little fine sand, loose, damp.	
0.2						GP			
0.6								13-20': Brown-gray, sandy, coarse GRAVEL, well-rounded, little cobbles, little	
0.3					15				15.0
0.4								silt, damp, loose.	
0.2									
0.2						GP			
0.5				X					
0.2	MW8-5/19/23-18'								6/13/23
0.2					20				& COBBLES 20.0
0.1		100				GP		20-22': Brown, silty, coarse GRAVEL, well-rounded, little fine sand, loose, moist.	
0.9									
0.2						SP		22-25': Brown, gravelly SAND: coarse, well-rounded, trace cobbles, trace silt, V. wet, loose.	
0.1									
0.1				X	25				25.0
	MW8-5/19/23-25'							TD = 25'	
					30				30.0

Well Diagram MW 8



18' 1115
25' 1120

BORING/WELL CONSTRUCTION LOG

Project Number	E2023/0407	Boring/Well Number	MW9
Project Name	Additional SI - May 2023	Date Drilled	5/18/23
Location	1201 S. 1st Street, Yakima, WA 98901	Casing Type/Diameter	6" OD
Drilling Method	Terra Sonic	Screen Type/Slot	Schedule 40 PVC/0.010" PVC 2" dia
Sampling Method	Core Barrel / Sample Bag (Continuous)	Gravel Pack Type	Silica Sand
Ground Elevation		Grout Type	Bentonite
Top of Casing Elevation		Depth to Water/Date	19.32' btoc 6/13/23
Logged by	Brent Bergeron, LHG	Ground Water Elevation/Date	
Remarks		Drilling Co.	Anderson Environmental Contracting (AEC)

PID (ppm)	Blow Counts	Recovery (%)	Sampling Method	Sample	Depth (ft. BGL)	U.S.C.S	Graphic Log	Lithologic Description	Contact Depth	Well Diagram
1	NA	0			5			NO RECOVERY	5.0	MW9
		50			10				10.0	
					15				15.0	
0.3								15-18': Gray-brown, sandy, coarse GRAVEL, well-rounded, loose, damp to moist.		
0.5										
0.3										
0.2	MW9-5/19/23-18'			X				18-20': Brown SAND & GRAVEL, coarse, well-rounded, loose., wet @ 18'		
0.2					20				20.0	
0.1		100						20-26': Gray, pulverized, silty, coarse GRAVEL, dry, loose		
0.2										
0.1										
0.1									6/13/23	
0.1					25				25.0	
0								26-27': Brown, medium SAND, little cobble, wet		
0										
MW9-5/19/23-27'				X				TD = 27'		
					30				30.0	

18' 1315

27' 1320

GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW1 Date: 6/13/23

Facility Name/Project No.: 1201 S. 1st Street, Yakima, WA / E2023-0607

GW Sampler/Company: BNB + CL / BMEC

Well Depth (TD) below Top of Casing (TOC): 25' Depth to Water (DTW) below TOC: 18.28'

Height of Groundwater Column (H) = TD - DTW (Feet): 6.72' Well Radius [r] (Inches): 1"

2-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.163 Gal/Foot] X [H (Feet)] = 1.09 gal
4-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.653 Gal/Foot] X [H (Feet)] = NA

Calculated Volume of Groundwater Needed to be Removed (Gal): 3 V = 3.27 gal

GROUNDWATER PARAMETERS						
Volume Purged (Gal)	pH	Temp (deg C)	Cond mS/cm (µS)	Turb (ntu)	Comments [i.e., Odor(s), Water Color/Silt Content, Sheen]	DO (mg/L)
0.25	6.69	18.60	0.308	>1000	Mod silty; green-gray; dark globs of?	10.65
1	6.65	17.91	0.348	>1000		10.99
2	6.54	18.18	0.359	>1000		11.51
3	6.56	17.98	0.370	>1000		11.05
4	6.64	18.03	0.368	>1000		10.94

Actual Volume Purged (Gal) 4 gal DTW After Purging and Before Sampling: 18.33'

GROUNDWATER SAMPLE COLLECTION DATA				
Sample ID	Time	Analyses	# of Containers/Size	Preservative
MW1-6/13/23	1640	Dx	2	HCl
		RCRA Metals	1	HNO_3
		Chlorinated Solvents	4	HCl

NOTES: Purged via peristaltic pump + tubing (dedicated)

Weather: Sunny, T~81°F, W@17 MPH

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GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW2 Date: 6/13/23

Facility Name/Project No.: 1201 S. 1st Street, Yakima, WA / E2023-0607

GW Sampler/Company: BNB + CL / BMEC

Well Depth (TD) below Top of Casing (TOC): 25' Depth to Water (DTW) below TOC: 19.32'

Height of Groundwater Column (H) = TD - DTW (Feet): 5.68' Well Radius [r] (Inches): 1"

2-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.163 Gal/Foot] X [H (Feet)] = 0.925 gal
4-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.653 Gal/Foot] X [H (Feet)] = NA

Calculated Volume of Groundwater Needed to be Removed (Gal): 3 V = 2.8 gal

GROUNDWATER PARAMETERS						
Volume Purged (Gal)	pH	Temp (deg C)	Cond mS/cm (µS)	Turb (ntu)	Comments [i.e., Odor(s), Water Color/Silt Content, Sheen]	DO (mg/L)
0.25	6.90	21.19	1.08	678	Mod silty; green-gray	10.14
1	7.24	18.93	0.739	259	Clear	11.03
2	6.90	18.61	0.625	217	↓	10.90
3	7.02	18.70	0.589	146	↓	10.52
3.5	6.89	18.28	0.545	136		10.79

Actual Volume Purged (Gal) 3.5 gal DTW After Purging and Before Sampling: 19.43'

GROUNDWATER SAMPLE COLLECTION DATA				
Sample ID	Time	Analyses	# of Containers/Size	Preservative
MW2-6/13/23	1615	Dx	2	HCl
		RCRA Metals	1	HNO_3
		Chlorinated Solvents	4	HCl

NOTES: Purged via peristaltic pump & tubing (dedicated)

Weather: Overcast, T ~ 83°F, W @ 16 MPH

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MONITORING WELL DEVELOPMENT FIELD DATA SHEET

WELL ID: MW3A Date: 6/13/23

Facility Name/Project No.: 1201 S. 1st Street, Yakima, WA / E2023-0607

Well Developer/Company: BNB + CL / BMEC

Well Depth (TD) below Top of Casing (TOC): ~~25~~ 30' Depth to Water (DTW) below TOC: 19.00'

Height of Groundwater Column (H) = TD - DTW (Feet): 11.00' Well Radius [r] (Inches): 1"

2-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.163 Gal/Foot] X [H (Feet)] = 1.79 gal
4-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.653 Gal/Foot] X [H (Feet)] = NA

Calculated Volume of Groundwater Needed to be Removed (Gal): 10 V = 17.9 gal

GROUNDWATER PARAMETERS						
Volume Purged (Gal)	pH	Temp (deg C)	Cond ~~(µS)~~ mS/cm	Turb (ntu)	Comments [i.e., Odor(s), Water Color/Silt Content, Sheen]	DO (mg/L)
0.25	6.69	19.44	0.360	533	SI. silty	13.57
1	6.53	19.48	0.356	93.5	Clear	11.28
2	6.58	18.56	0.359	73.7		11.63
4	6.61	18.74	0.359	64.3		11.14
6	6.45	20.35	0.358	64.2		10.44
8	6.43	19.25	0.354	60.7		10.73
10	6.49	18.66	0.358	60.9		10.93
12	6.44	18.77	0.356	62.4		10.74
14	6.51	18.87	0.357	59.7		15.31
16	6.57	18.55	0.358	60.1		11.87
18	6.48	18.47	0.359	61.5		11.58

Actual Volume Purged (Gal) 18 gal DTW When Well Development Has Ended:

NOTES: Surged via bailer/rope(dedicated); purged via peristaltic pump + tubing(dedica

Weather: Sunny, T-85°F, WNW @ 7MPH

Time Sampled: 1200

MW3A-6/13/23

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GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW4 Date: 6/13/23

Facility Name/Project No.: 1201 S. 1st Street, Yakima, WA / E2023-0607

GW Sampler/Company: BNB • CL / BMEC

Well Depth (TD) below Top of Casing (TOC): 25' Depth to Water (DTW) below TOC: 18.43'

Height of Groundwater Column (H) = TD - DTW (Feet): 6.57' Well Radius [r] (Inches): 1"

2-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.163 Gal/Foot] X [H (Feet)] = 1.07 gal
4-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.653 Gal/Foot] X [H (Feet)] = NA

Calculated Volume of Groundwater Needed to be Removed (Gal): 3V = 3.21 gal

GROUNDWATER PARAMETERS						
Volume Purged (Gal)	pH	Temp (deg C)	Cond mS/cm (µS)	Turb (ntu)	Comments [i.e., Odor(s), Water Color/Silt Content, Sheen]	DO (mg/L)
0.25	6.57	18.48	0.364	>1000	Very silty	18.05
1	6.58	17.91	0.360	320	Clear	12.52
2	6.52	17.80	0.359	2.51		11.86
3	6.47	17.79	0.359	185		11.64
3.5	6.49	17.72	0.359	165		11.59

Actual Volume Purged (Gal) 3.5 gal DTW After Purging and Before Sampling: 18.43'

GROUNDWATER SAMPLE COLLECTION DATA				
Sample ID	Time	Analyses	# of Containers/Size	Preservative
MW4 - 6/13/23	1000	Dx	2	HCl
		RCRA Metals	1	HNO_3
		Chlorinated Solvents	4	HCl

NOTES: Purged via peristaltic pump + tubing (dedicated)

Weather: Sunny, T~83°F, NW @ 7 MPH

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GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW5 Date: 6/13/23

Facility Name/Project No.: 1201 S. 1st Street, Yakima, WA / E2023-0607

GW Sampler/Company: BNB • CL / BMEC

Well Depth (TD) below Top of Casing (TOC): 25' Depth to Water (DTW) below TOC: 18.16'

Height of Groundwater Column (H) = TD - DTW (Feet): 6.84' Well Radius [r] (Inches): 1"

2-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.163 Gal/Foot] X [H (Feet)] = 1.11 gal
4-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.653 Gal/Foot] X [H (Feet)] = NA

Calculated Volume of Groundwater Needed to be Removed (Gal): 3V = 3.33 gal

GROUNDWATER PARAMETERS						
Volume Purged (Gal)	pH	Temp (deg C)	Cond mS/cm (µS)	Turb (ntu)	Comments [i.e., Odor(s), Water Color/Silt Content, Sheen]	DO (mg/L)
0.25	6.91	18.38	0.398	348	Sl. silty	14.48
1	6.90	17.97	0.391	923	Mod. silty	12.30
2	6.90	17.68	0.387	505	↓	12.01
3	6.80	17.70	0.386	278	Clear	11.66
3.5	6.81	17.46	0.386	236	↓	11.68

Actual Volume Purged (Gal) 3.5 gal DTW After Purging and Before Sampling: 18.59'

GROUNDWATER SAMPLE COLLECTION DATA				
Sample ID	Time	Analyses	# of Containers/Size	Preservative
MW5 - 6/13/23	0925	Dx	2	HCl
		RCRA Metals	1	HNO_3
		Chlorinated Solvents	4	HCl

NOTES: Purged via peristaltic pump & tubing (dedicated)

Weather: Sunny, T~80°F, NW @ 6MPH

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GROUNDWATER SAMPLING FIELD DATA SHEET

WELL ID: MW6 Date: 6/13/23

Facility Name/Project No.: 1201 S. 1st Street, Yakima, WA / E2023-0607

GW Sampler/Company: BNB & CL / BMEC

Well Depth (TD) below Top of Casing (TOC): 25' Depth to Water (DTW) below TOC: 17.95'

Height of Groundwater Column (H) = TD - DTW (Feet): 7.05' Well Radius [r] (Inches): 1"

2-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.163 Gal/Foot] X [H (Feet)] = 1.15 gal
4-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.653 Gal/Foot] X [H (Feet)] = NA

Calculated Volume of Groundwater Needed to be Removed (Gal): 3 V = 3.45 gal

GROUNDWATER PARAMETERS						
Volume Purged (Gal)	pH	Temp (deg C)	Cond mS/cm (µS)	Turb (ntu)	Comments [i.e., Odor(s), Water Color/Silt Content, Sheen]	DO (mg/L)
0.25	6.67	18.37	0.360	497	Clear w/ some fine SAND	11.39
1	6.60	17.54	0.360	105	Clear	11.72
2	6.48	17.21	0.360	87.9	↓	11.64
3	6.41	17.10	0.360	73.3	↓	11.66
3.5	6.40	17.01	0.361	69.4	↓	11.58

Actual Volume Purged (Gal) 3.5 gal DTW After Purging and Before Sampling: 17.96'

GROUNDWATER SAMPLE COLLECTION DATA				
Sample ID	Time	Analyses	# of Containers/Size	Preservative
MW6-6/13/23	0816	Dx	2	HCl
		RCRA Metals	1	HNO_3
		Chlorinated Solvents	4	HCl

NOTES: Purged via peristaltic pump & tubing (dedicated)

Weather: Sunny, T~77°F, NW @ 5 MPH

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MONITORING WELL DEVELOPMENT FIELD DATA SHEET

WELL ID: MW7 **Date:** 6/13/23

Facility Name/Project No.: 1201 S. 1st Street, Yakima, WA / E2023-0607

Well Developer/Company: BNB & CL / BMEC

Well Depth (TD) below Top of Casing (TOC): 25' Depth to Water (DTW) below TOC: 19.17'

Height of Groundwater Column (H) = TD - DTW (Feet): 5.83' Well Radius [r] (Inches): 1"

2-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.163 Gal/Foot] X [H (Feet)] = 0.95 gal
4-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.653 Gal/Foot] X [H (Feet)] = NA

Calculated Volume of Groundwater Needed to be Removed (Gal): 10 V = 9.5 gal

GROUNDWATER PARAMETERS						
Volume Purged (Gal)	pH	Temp (deg C)	Cond ~~mS/cm~~ (µS)	Turb (ntu)	Comments [i.e., Odor(s), Water Color/Silt Content, Sheen]	DO (mg/L)
0.25	6.99	19.78	0.323	>1000	Extremely silty; brown	12.16
1	6.62	19.21	0.335	340	V. slightly silty	11.15
2	6.61	18.51	0.344	150	Clear	11.23
4	6.50	18.48	0.346	104	↓	11.05
6	6.51	18.63	0.334	82.1		10.67
8	6.47	18.38	0.330	72.6		11.84
10	6.81	18.13	0.331	72.6		11.21

Actual Volume Purged (Gal) 10 gal DTW When Well Development Has Ended: 19.17'

NOTES: Surged via bailer/rope(dedicated); purged via peristaltic pump & tubing(dedica

Weather: Cloudy, T~90°F, W@8 MPH

Time Sampled: 1330

MW7-6/13/23

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MONITORING WELL DEVELOPMENT FIELD DATA SHEET

WELL ID: MW8 **Date:** 6/13/23

Facility Name/Project No.: 1201 S. 1st Street, Yakima, WA / E2023-0607

Well Developer/Company: BNB & CL / BMEC

Well Depth (TD) below Top of Casing (TOC): 25' Depth to Water (DTW) below TOC: 19.58'

Height of Groundwater Column (H) = TD - DTW (Feet): 5.42' Well Radius [r] (Inches): 1"

2-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.163 Gal/Foot] X [H (Feet)] = 0.88 gal
4-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.653 Gal/Foot] X [H (Feet)] = NA

Calculated Volume of Groundwater Needed to be Removed (Gal): 8.8 gal

GROUNDWATER PARAMETERS						
Volume Purged (Gal)	pH	Temp (deg C)	Cond mS/cm (µS)	Turb (ntu)	Comments [i.e., Odor(s), Water Color/Silt Content, Sheen]	DO (mg/L)
0.25	7.95	19.71	0.376	>1000	Extremely silty; dk gray	16.36
1	7.94	19.74	0.279	>1000	↓	11.69
2	7.46	18.46	0.233	>1000	↓	11.83
4	7.46	18.19	0.197	>1000	Moderately silty	11.30
6	7.09	18.78	0.191	893	↓	11.09
8	7.13	18.22	0.190	589	Slightly silty	12.80
9	6.99	17.92	0.190	449	V. slightly silty	11.33
10	6.84	17.81	0.190	364		11.03

Actual Volume Purged (Gal) 10 gal DTW When Well Development Has Ended: 20.13'

NOTES: Surged via bailer/rope(dedicated); purged via peristaltic pump & tubing(dedica

Weather: Cloudy, T~87°F, W @ 13 MPH

Time sampled: 1425

MW8-6/13/23

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MONITORING WELL DEVELOPMENT FIELD DATA SHEET

WELL ID: MW9 **Date:** 6/13/23

Facility Name/Project No.: 1201 S. 1st Street, Yakima, WA / E2023-0607

Well Developer/Company: BNB + CL / BMEC

Well Depth (TD) below Top of Casing (TOC): 25' Depth to Water (DTW) below TOC: 19.32'

Height of Groundwater Column (H) = TD - DTW (Feet): 5.68' Well Radius [r] (Inches): 1"

2-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.163 Gal/Foot] X [H (Feet)] = 0.926 gal
4-Inch Diameter Well:	Volume (V) of Groundwater Per Water Column in Gal = [0.653 Gal/Foot] X [H (Feet)] = NA

Calculated Volume of Groundwater Needed to be Removed (Gal): 10V=9.26 gal

GROUNDWATER PARAMETERS						
Volume Purged (Gal)	pH	Temp (deg C)	Cond mS/cm (µS)	Turb (ntu)	Comments [i.e., Odor(s), Water Color/Silt Content, Sheen]	DO (mg/L)
0.25	7.03	20.05	0.160	> 1000	Very silty; brown	11.76
1	7.61	20.18	0.156	309	Very slightly silty	6.36
2	7.58	20.16	0.157	200	Clear ↓	10.26
4	7.41	20.42	0.156	118		10.09
6	7.12	20.66	0.156	98.9		9.90
8	7.20	20.32	0.157	77.2		11.92
10	7.12	20.62	0.156	80.9		10.01

Actual Volume Purged (Gal) 10 gal DTW When Well Development Has Ended: 19.41'

NOTES: Surged via bailer/rope(dedicated); purged via peristaltic pump + tubing(dedica

Weather: Overcast, T~85°F, W@14 MPH

Time Sampled: 1545

MW9-6/13/23

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APPENDIX E

LABORATORY ANALYTICAL DOCUMENTATION

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

May 26, 2023

Peter Trabusiner
Blue Mountain Environmental, Inc.
1500 Adair Drive
Richland, WA 99352

Re: Analytical Data for Project E2023-0407; 1201 S 1st ST YAKIMA
Laboratory Reference No. 2305-243

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on May 23, 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,

David Baumeister
Project Manager

Enclosures

Date of Report: May 26, 2023
Samples Submitted: May 23, 2023
Laboratory Reference: 2305-243
Project: E2023-0407; 1201 S 1st ST YAKIMA

Case Narrative

Samples were collected on May 19, 2023 and received by the laboratory on May 23, 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.

NWTPH-Dx Analysis

The duplicate RPD is outside of the control limits due to sample inhomogeniety.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: May 26, 2023
Samples Submitted: May 23, 2023
Laboratory Reference: 2305-243
Project: E2023-0407; 1201 S 1st ST YAKIMA

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW7-5-19-23-18'**					
Laboratory ID:	05-243-01					
Diesel Range Organics	**ND**	27	NWTPH-Dx	5-25-23	5-25-23	
Lube Oil Range Organics	**ND**	53	NWTPH-Dx	5-25-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				
Client ID:	**MW7-5-19-23-25'**					
Laboratory ID:	05-243-02					
Diesel Range Organics	**ND**	27	NWTPH-Dx	5-25-23	5-25-23	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	5-25-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*73*	*50-150*				
Client ID:	**MW8-5-19-23-18'**					
Laboratory ID:	05-243-03					
Diesel Range Organics	**ND**	27	NWTPH-Dx	5-25-23	5-25-23	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	5-25-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				
Client ID:	**MW8-5-19-23-25'**					
Laboratory ID:	05-243-04					
Diesel Range Organics	**ND**	27	NWTPH-Dx	5-25-23	5-25-23	
Lube Oil Range Organics	**ND**	55	NWTPH-Dx	5-25-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*87*	*50-150*				
Client ID:	**MW9-5-19-23-18'**					
Laboratory ID:	05-243-05					
Diesel Range Organics	**ND**	26	NWTPH-Dx	5-25-23	5-25-23	
Lube Oil Range Organics	**ND**	52	NWTPH-Dx	5-25-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**MW9-5-19-23-27'**					
Laboratory ID:	05-243-06					
Diesel Range Organics	**ND**	29	NWTPH-Dx	5-25-23	5-25-23	
Lube Oil Range Organics	**ND**	58	NWTPH-Dx	5-25-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*74*	*50-150*				

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DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW3a-5-19-23-20'**					
Laboratory ID:	05-243-07					
Diesel Range Organics	**ND**	26	NWTPH-Dx	5-25-23	5-25-23	
Lube Oil Range Organics	**ND**	53	NWTPH-Dx	5-25-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*54*	*50-150*				
Client ID:	**MW3a-5-19-23-30'**					
Laboratory ID:	05-243-08					
Diesel Range Organics	**ND**	28	NWTPH-Dx	5-25-23	5-25-23	
Lube Oil Range Organics	**ND**	55	NWTPH-Dx	5-25-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				

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DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0525S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	5-25-23	5-25-23	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	5-25-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*73*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-279-01										
	ORIG	DUP									
Diesel Fuel #2	**171**	**128**	NA	NA		NA		NA	29	40	
Lube Oil	**192**	**123**	NA	NA		NA		NA	44	40	L
Surrogate:											
o-Terphenyl						*93*	*81*	*50-150*			

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW7-5-19-23-18'**					
Laboratory ID:	05-243-01					
Arsenic	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Barium	**26**	2.7	EPA 6010D	5-25-23	5-25-23	
Cadmium	**ND**	0.53	EPA 6010D	5-25-23	5-25-23	
Chromium	**6.2**	0.53	EPA 6010D	5-25-23	5-25-23	
Lead	**ND**	5.3	EPA 6010D	5-25-23	5-25-23	
Mercury	**ND**	0.27	EPA 7471B	5-26-23	5-26-25	
Selenium	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Silver	**ND**	1.1	EPA 6010D	5-25-23	5-25-23	
Client ID:	**MW7-5-19-23-25'**					
Laboratory ID:	05-243-02					
Arsenic	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Barium	**32**	2.7	EPA 6010D	5-25-23	5-25-23	
Cadmium	**ND**	0.54	EPA 6010D	5-25-23	5-25-23	
Chromium	**6.9**	0.54	EPA 6010D	5-25-23	5-25-23	
Lead	**ND**	5.4	EPA 6010D	5-25-23	5-25-23	
Mercury	**ND**	0.27	EPA 7471B	5-26-23	5-26-25	
Selenium	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Silver	**ND**	1.1	EPA 6010D	5-25-23	5-25-23	
Client ID:	**MW8-5-19-23-18'**					
Laboratory ID:	05-243-03					
Arsenic	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Barium	**47**	2.7	EPA 6010D	5-25-23	5-25-23	
Cadmium	**ND**	0.54	EPA 6010D	5-25-23	5-25-23	
Chromium	**8.8**	0.54	EPA 6010D	5-25-23	5-25-23	
Lead	**ND**	5.4	EPA 6010D	5-25-23	5-25-23	
Mercury	**ND**	0.27	EPA 7471B	5-26-23	5-26-25	
Selenium	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Silver	**ND**	1.1	EPA 6010D	5-25-23	5-25-23	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW8-5-19-23-25'**					
Laboratory ID:	05-243-04					
Arsenic	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Barium	**28**	2.7	EPA 6010D	5-25-23	5-25-23	
Cadmium	**ND**	0.55	EPA 6010D	5-25-23	5-25-23	
Chromium	**8.8**	0.55	EPA 6010D	5-25-23	5-25-23	
Lead	**ND**	5.5	EPA 6010D	5-25-23	5-25-23	
Mercury	**0.38**	0.27	EPA 7471B	5-26-23	5-26-25	
Selenium	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Silver	**ND**	1.1	EPA 6010D	5-25-23	5-25-23	
Client ID:	**MW9-5-19-23-18'**					
Laboratory ID:	05-243-05					
Arsenic	**ND**	10	EPA 6010D	5-25-23	5-25-23	
Barium	**56**	2.6	EPA 6010D	5-25-23	5-25-23	
Cadmium	**ND**	0.52	EPA 6010D	5-25-23	5-25-23	
Chromium	**6.1**	0.52	EPA 6010D	5-25-23	5-25-23	
Lead	**ND**	5.2	EPA 6010D	5-25-23	5-25-23	
Mercury	**ND**	0.26	EPA 7471B	5-26-23	5-26-25	
Selenium	**ND**	10	EPA 6010D	5-25-23	5-25-23	
Silver	**ND**	1.0	EPA 6010D	5-25-23	5-25-23	
Client ID:	**MW9-5-19-23-27'**					
Laboratory ID:	05-243-06					
Arsenic	**ND**	12	EPA 6010D	5-25-23	5-25-23	
Barium	**67**	2.9	EPA 6010D	5-25-23	5-25-23	
Cadmium	**ND**	0.58	EPA 6010D	5-25-23	5-25-23	
Chromium	**12**	0.58	EPA 6010D	5-25-23	5-25-23	
Lead	**ND**	5.8	EPA 6010D	5-25-23	5-25-23	
Mercury	**ND**	0.29	EPA 7471B	5-26-23	5-26-25	
Selenium	**ND**	12	EPA 6010D	5-25-23	5-25-23	
Silver	**ND**	1.2	EPA 6010D	5-25-23	5-25-23	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW3a-5-19-23-20'**					
Laboratory ID:	05-243-07					
Arsenic	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Barium	**53**	2.6	EPA 6010D	5-25-23	5-25-23	
Cadmium	**ND**	0.53	EPA 6010D	5-25-23	5-25-23	
Chromium	**5.4**	0.53	EPA 6010D	5-25-23	5-25-23	
Lead	**ND**	5.3	EPA 6010D	5-25-23	5-25-23	
Mercury	**ND**	0.26	EPA 7471B	5-26-23	5-26-25	
Selenium	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Silver	**ND**	1.1	EPA 6010D	5-25-23	5-25-23	
Client ID:	**MW3a-5-19-23-30'**					
Laboratory ID:	05-243-08					
Arsenic	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Barium	**59**	2.8	EPA 6010D	5-25-23	5-25-23	
Cadmium	**ND**	0.55	EPA 6010D	5-25-23	5-25-23	
Chromium	**6.0**	0.55	EPA 6010D	5-25-23	5-25-23	
Lead	**ND**	5.5	EPA 6010D	5-25-23	5-25-23	
Mercury	**ND**	0.28	EPA 7471B	5-26-23	5-26-25	
Selenium	**ND**	11	EPA 6010D	5-25-23	5-25-23	
Silver	**ND**	1.1	EPA 6010D	5-25-23	5-25-23	

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TOTAL METALS
EPA 6010D/7471B
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0525SM1					
Arsenic	**ND**	10	EPA 6010D	5-25-23	5-25-25	
Barium	**ND**	2.5	EPA 6010D	5-25-23	5-25-25	
Cadmium	**ND**	0.50	EPA 6010D	5-25-23	5-25-25	
Chromium	**ND**	0.50	EPA 6010D	5-25-23	5-25-25	
Lead	**ND**	5.0	EPA 6010D	5-25-23	5-25-25	
Selenium	**ND**	10	EPA 6010D	5-25-23	5-25-25	
Silver	**ND**	1.0	EPA 6010D	5-25-23	5-25-25	
Laboratory ID:	MB0526S1					
Mercury	**ND**	0.25	EPA 7471B	5-26-23	5-26-25	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-243-02										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Barium	**29.8**	**31.4**	NA	NA		NA		NA	5	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**6.40**	**5.35**	NA	NA		NA		NA	18	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Selenium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Silver	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	05-243-02										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	05-243-02										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**90.5**	**93.3**	100	100	ND	**91**	**93**	75-125	3	20	
Barium	**120**	**125**	100	100	29.8	**90**	**96**	75-125	4	20	
Cadmium	**45.0**	**46.9**	50.0	50.0	ND	**90**	**94**	75-125	4	20	
Chromium	**96.0**	**99.8**	100	100	6.40	**90**	**93**	75-125	4	20	
Lead	**227**	**236**	250	250	ND	**91**	**94**	75-125	4	20	
Selenium	**92.3**	**94.1**	100	100	ND	**92**	**94**	75-125	2	20	
Silver	**22.9**	**23.8**	25.0	25.0	ND	**91**	**95**	75-125	4	20	
Laboratory ID:	05-243-02										
Mercury	**0.529**	**0.507**	0.500	0.500	0.0121	**103**	**99**	80-120	4	20	

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VOLATILE ORGANICS EPA 8260D

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW7-5-19-23-18'**					
Laboratory ID:	05-243-01					
Vinyl Chloride	ND	0.0011	EPA 8260D	5-24-23	5-24-23	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	5-24-23	5-24-23	
Trichloroethene	ND	0.0011	EPA 8260D	5-24-23	5-24-23	
Tetrachloroethene	ND	0.0011	EPA 8260D	5-24-23	5-24-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*66-133*				
Toluene-d8	*81*	*78-128*				
4-Bromofluorobenzene	*98*	*71-130*				
Client ID:	**MW7-5-19-23-25'**					
Laboratory ID:	05-243-02					
Vinyl Chloride	ND	0.00096	EPA 8260D	5-24-23	5-24-23	
(cis) 1,2-Dichloroethene	ND	0.00096	EPA 8260D	5-24-23	5-24-23	
Trichloroethene	ND	0.00096	EPA 8260D	5-24-23	5-24-23	
Tetrachloroethene	0.0018	0.00096	EPA 8260D	5-24-23	5-24-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*66-133*				
Toluene-d8	*89*	*78-128*				
4-Bromofluorobenzene	*108*	*71-130*				
Client ID:	**MW8-5-19-23-18'**					
Laboratory ID:	05-243-03					
Vinyl Chloride	ND	0.0012	EPA 8260D	5-24-23	5-24-23	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	5-24-23	5-24-23	
Trichloroethene	ND	0.0012	EPA 8260D	5-24-23	5-24-23	
Tetrachloroethene	ND	0.0012	EPA 8260D	5-24-23	5-24-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*66-133*				
Toluene-d8	*101*	*78-128*				
4-Bromofluorobenzene	*103*	*71-130*				

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VOLATILE ORGANICS EPA 8260D

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW8-5-19-23-25'**					
Laboratory ID:	05-243-04					
Vinyl Chloride	ND	0.00095	EPA 8260D	5-24-23	5-24-23	
(cis) 1,2-Dichloroethene	ND	0.00095	EPA 8260D	5-24-23	5-24-23	
Trichloroethene	ND	0.00095	EPA 8260D	5-24-23	5-24-23	
Tetrachloroethene	ND	0.00095	EPA 8260D	5-24-23	5-24-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*93*	*66-133*				
Toluene-d8	*82*	*78-128*				
4-Bromofluorobenzene	*110*	*71-130*				
Client ID:	**MW9-5-19-23-18'**					
Laboratory ID:	05-243-05					
Vinyl Chloride	ND	0.00078	EPA 8260D	5-26-23	5-26-23	
(cis) 1,2-Dichloroethene	ND	0.00078	EPA 8260D	5-26-23	5-26-23	
Trichloroethene	ND	0.00078	EPA 8260D	5-26-23	5-26-23	
Tetrachloroethene	0.00099	0.00078	EPA 8260D	5-26-23	5-26-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*88*	*66-133*				
Toluene-d8	*91*	*78-128*				
4-Bromofluorobenzene	*95*	*71-130*				
Client ID:	**MW9-5-19-23-27'**					
Laboratory ID:	05-243-06					
Vinyl Chloride	ND	0.0012	EPA 8260D	5-24-23	5-25-23	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260D	5-24-23	5-25-23	
Trichloroethene	ND	0.0012	EPA 8260D	5-24-23	5-25-23	
Tetrachloroethene	0.0026	0.0012	EPA 8260D	5-24-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*79*	*66-133*				
Toluene-d8	*89*	*78-128*				
4-Bromofluorobenzene	*121*	*71-130*				

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VOLATILE ORGANICS EPA 8260D

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW3a-5-19-23-20'**					
Laboratory ID:	05-243-07					
Vinyl Chloride	ND	0.0013	EPA 8260D	5-24-23	5-25-23	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260D	5-24-23	5-25-23	
Trichloroethene	ND	0.0013	EPA 8260D	5-24-23	5-25-23	
Tetrachloroethene	ND	0.0013	EPA 8260D	5-24-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*91*	*66-133*				
Toluene-d8	*88*	*78-128*				
4-Bromofluorobenzene	*103*	*71-130*				
Client ID:	**MW3a-5-19-23-30'**					
Laboratory ID:	05-243-08					
Vinyl Chloride	ND	0.00095	EPA 8260D	5-24-23	5-25-23	
(cis) 1,2-Dichloroethene	ND	0.00095	EPA 8260D	5-24-23	5-25-23	
Trichloroethene	ND	0.00095	EPA 8260D	5-24-23	5-25-23	
Tetrachloroethene	ND	0.00095	EPA 8260D	5-24-23	5-25-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*82*	*66-133*				
Toluene-d8	*86*	*78-128*				
4-Bromofluorobenzene	*105*	*71-130*				

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VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0524S1					
Vinyl Chloride	ND	0.0010	EPA 8260D	5-24-23	5-24-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-24-23	5-24-23	
Trichloroethene	ND	0.0010	EPA 8260D	5-24-23	5-24-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-24-23	5-24-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*66-133*				
Toluene-d8	*85*	*78-128*				
4-Bromofluorobenzene	*114*	*71-130*				
Laboratory ID:	MB0526S1					
Vinyl Chloride	ND	0.0010	EPA 8260D	5-26-23	5-26-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	5-26-23	5-26-23	
Trichloroethene	ND	0.0010	EPA 8260D	5-26-23	5-26-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	5-26-23	5-26-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*87*	*66-133*				
Toluene-d8	*94*	*78-128*				
4-Bromofluorobenzene	*97*	*71-130*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0524S1									
	SB	SBD	SB	SBD	SB	SBD				
Vinyl Chloride	**0.0459**	**0.0449**	0.0500	0.0500	92	90	66-134	2	17	
(cis) 1,2-Dichloroethene	**0.0534**	**0.0565**	0.0500	0.0500	107	113	76-135	6	15	
Trichloroethene	**0.0531**	**0.0471**	0.0500	0.0500	106	94	81-132	12	15	
Tetrachloroethene	**0.0480**	**0.0483**	0.0500	0.0500	96	97	80-136	1	15	
Surrogate:										
Dibromofluoromethane					*95*	*97*	*66-133*			
Toluene-d8					*94*	*79*	*78-128*			
4-Bromofluorobenzene					*119*	*104*	*71-130*			
Laboratory ID:	SB0526S1									
	SB	SBD	SB	SBD	SB	SBD				
Vinyl Chloride	**0.0497**	**0.0469**	0.0500	0.0500	99	94	66-134	6	17	
(cis) 1,2-Dichloroethene	**0.0501**	**0.0495**	0.0500	0.0500	100	99	76-135	1	15	
Trichloroethene	**0.0537**	**0.0526**	0.0500	0.0500	107	105	81-132	2	15	
Tetrachloroethene	**0.0535**	**0.0546**	0.0500	0.0500	107	109	80-136	2	15	
Surrogate:										
Dibromofluoromethane					*90*	*88*	*66-133*			
Toluene-d8					*95*	*95*	*78-128*			
4-Bromofluorobenzene					*104*	*103*	*71-130*			

Date of Report: May 26, 2023
Samples Submitted: May 23, 2023
Laboratory Reference: 2305-243
Project: E2023-0407; 1201 S 1st ST YAKIMA

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
MW7-5-19-23-18'	05-243-01	**6**	5-25-23
MW7-5-19-23-25'	05-243-02	**7**	5-25-23
MW8-5-19-23-18'	05-243-03	**7**	5-25-23
MW8-5-19-23-25'	05-243-04	**9**	5-25-23
MW9-5-19-23-18'	05-243-05	**4**	5-25-23
MW9-5-19-23-27'	05-243-06	**13**	5-25-23
MW3a-5-19-23-20'	05-243-07	**5**	5-25-23
MW3a-5-19-23-30'	05-243-08	**10**	5-25-23

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

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

Chain of Custody

Page 1 of 1

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

Laboratory Number: 05-243

Company: BMEC
Project Number: E2023-007
Project Name: 1201 S. 1ST ST YAKIMA
Project Manager: P. TRASUINER / B. BERLEBON
Sampled by: Y. MEYER

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up☐)	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	PCE, TCE, VC, C1,2-DCE 8260				% Moisture
1	MW7-5-19-23-18'	5-19-23	0900	SOIL	4				X										X				X				X
2	MW7-5-19-23-25'		0905																								X
3	MW8-5-19-23-18'		1115																								X
4	MW8-5-19-23-25'		1120																								X
5	MW9-5-19-23-18'		1315																								X
6	MW9-5-19-23-27		1320																								X
7	MW3a-5-19-23-20'		1445																								X
8	MW3a-5-19-23-30'		1450																								X

	Signature	Company	Date	Time
Relinquished		BMEC	5-22-23	0800
Received		OSE	5/23/23	1340
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

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

June 20, 2023

Peter Trabusiner
Blue Mountain Environmental, Inc.
1500 Adair Drive
Richland, WA 99352

Re: Analytical Data for Project E2023/0607; 1201 S 1st St Yakima
Laboratory Reference No. 2306-191

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on June 15, 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,

David Baumeister
Project Manager

Enclosures

Date of Report: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

Case Narrative

Samples were collected on June 13, 2023 and received by the laboratory on June 15, 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: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW6-6-13-23**					
Laboratory ID:	06-191-01					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*120*	*50-150*				
Client ID:	**MW5-6-13-23**					
Laboratory ID:	06-191-02					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				
Client ID:	**MW4-6-13-23**					
Laboratory ID:	06-191-03					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*108*	*50-150*				
Client ID:	**MW3A-6-13-23**					
Laboratory ID:	06-191-04					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				
Client ID:	**MW7-6-13-23**					
Laboratory ID:	06-191-05					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*115*	*50-150*				
Client ID:	**MW8-6-13-23**					
Laboratory ID:	06-191-06					
Diesel Range Organics	**ND**	0.22	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.22	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*123*	*50-150*				

Date of Report: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW9-6-13-23**					
Laboratory ID:	06-191-07					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*117*	*50-150*				
Client ID:	**MW2-6-13-23**					
Laboratory ID:	06-191-08					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*110*	*50-150*				

Date of Report: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0619W1					
Diesel Range Organics	**ND**	0.16	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.16	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	SB0619W1										
	ORIG	DUP									
Diesel Fuel #2	**0.449**	**0.428**	NA	NA		NA		NA	5	40	
Surrogate:											
o-Terphenyl						*100*	*98*	*50-150*			

Date of Report: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

VOLATILE ORGANICS EPA 8260D

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW6-6-13-23**					
Laboratory ID:	06-191-01					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	1.1	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*75-127*				
Toluene-d8	*103*	*80-127*				
4-Bromofluorobenzene	*99*	*78-125*				
Client ID:	**MW5-6-13-23**					
Laboratory ID:	06-191-02					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	1.3	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*75-127*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				
Client ID:	**MW4-6-13-23**					
Laboratory ID:	06-191-03					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	0.97	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*75-127*				
Toluene-d8	*102*	*80-127*				
4-Bromofluorobenzene	*100*	*78-125*				

Date of Report: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

VOLATILE ORGANICS EPA 8260D

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW3A-6-13-23**					
Laboratory ID:	06-191-04					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	1.3	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*75-127*				
Toluene-d8	*103*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				
Client ID:	**MW7-6-13-23**					
Laboratory ID:	06-191-05					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	1.2	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*111*	*75-127*				
Toluene-d8	*103*	*80-127*				
4-Bromofluorobenzene	*99*	*78-125*				
Client ID:	**MW8-6-13-23**					
Laboratory ID:	06-191-06					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	1.1	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*75-127*				
Toluene-d8	*102*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				

Date of Report: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

VOLATILE ORGANICS EPA 8260D

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW9-6-13-23**					
Laboratory ID:	06-191-07					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*109*	*75-127*				
Toluene-d8	*103*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				
Client ID:	**MW2-6-13-23**					
Laboratory ID:	06-191-08					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	2.3	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*75-127*				
Toluene-d8	*102*	*80-127*				
4-Bromofluorobenzene	*98*	*78-125*				

Date of Report: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0619W1					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*75-127*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0619W1									
	SB	SBD	SB	SBD	SB	SBD				
Vinyl Chloride	**10.4**	**9.69**	10.0	10.0	104	97	66-133	7	15	
(cis) 1,2-Dichloroethene	**9.98**	**9.58**	10.0	10.0	100	96	84-130	4	15	
Trichloroethene	**9.88**	**9.60**	10.0	10.0	99	96	80-122	3	18	
Tetrachloroethene	**10.9**	**10.5**	10.0	10.0	109	105	80-125	4	15	
Surrogate:										
Dibromofluoromethane					*101*	*100*	*75-127*			
Toluene-d8					*102*	*103*	*80-127*			
4-Bromofluorobenzene					*101*	*100*	*78-125*			

Date of Report: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW6-6-13-23**					
Laboratory ID:	06-191-01					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW5-6-13-23**					
Laboratory ID:	06-191-02					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW4-6-13-23**					
Laboratory ID:	06-191-03					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW3A-6-13-23**					
Laboratory ID:	06-191-04					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	

Date of Report: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW7-6-13-23**					
Laboratory ID:	06-191-05					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW8-6-13-23**					
Laboratory ID:	06-191-06					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**1.1**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW9-6-13-23**					
Laboratory ID:	06-191-07					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW2-6-13-23**					
Laboratory ID:	06-191-08					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	

Date of Report: June 20, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

TOTAL METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0619WM1					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Laboratory ID:	MB0620W1					
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	06-191-01									
	ORIG	DUP								
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	06-191-01									
Mercury	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	06-191-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	**116**	**112**	111	111	ND	**105**	**101**	75-125	4	20
Cadmium	**116**	**114**	111	111	ND	**104**	**103**	75-125	2	20
Chromium	**112**	**108**	111	111	ND	**101**	**98**	75-125	4	20
Lead	**104**	**103**	111	111	ND	**94**	**93**	75-125	1	20
Laboratory ID:	06-191-01									
Mercury	**5.68**	**5.85**	6.25	6.25	ND	**91**	**94**	75-125	3	20

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

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

Chain of Custody

Page 1 of 1

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

Company: BMEC
Project Number: E2023 0607
Project Name: 1201 S 1st St Yakima
Project Manager: P. Trabusiner / B. Bergeron
Sampled by: C. Lynch

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

Laboratory Number: 06-191

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up☐)	Volatiles 8260	Halogenated Volatiles 8260 PCE, TCE, VC, (cis) 1,2-DCE	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 MTCA	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	MW6-6-13-23	6/13/23	0940	H_2O	7		*		X		X								X				
2	MW5-6-13-23		0925	H_2O					X		X								X				
3	MW4-6-13-23		1000	H_2O					X		X								X				
4	MW3A-6-1323		1200	H_2O					X		X								X				
5	MW7-6-13-23		1330	H_2O					X		X								X				
6	MW8-6-13-23		1425	H_2O	~~7~~ 6				X		X								X				
7	MW9-6-13-23		1545	H_2O	7				X		X								X				
8	MW2-6-13-23		1615	H_2O	7				X		X								X				
9	MW1-6-13-23		1640	H_2O	~~4~~ 3				~~X~~ NO PP		X								~~X~~	NO DP			

	Signature	Company	Date	Time
Relinquished	Caris Lynch	BMEC	6/14/23	0900
Received	~~X~~	OSE	6/15/23	1115
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Caris Lynch
509 386-2031

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

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

June 28, 2023

Peter Trabusiner
Blue Mountain Environmental, Inc.
1500 Adair Drive
Richland, WA 99352

Re: Analytical Data for Project E2023/0607; 1201 S 1st St Yakima
Laboratory Reference No. 2306-191

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on June 15, 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,

David Baumeister
Project Manager

Enclosures

Date of Report: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

Case Narrative

Samples were collected on June 13, 2023 and received by the laboratory on June 15, 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: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW6-6-13-23**					
Laboratory ID:	06-191-01					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*120*	*50-150*				
Client ID:	**MW5-6-13-23**					
Laboratory ID:	06-191-02					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				
Client ID:	**MW4-6-13-23**					
Laboratory ID:	06-191-03					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*108*	*50-150*				
Client ID:	**MW3A-6-13-23**					
Laboratory ID:	06-191-04					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				
Client ID:	**MW7-6-13-23**					
Laboratory ID:	06-191-05					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*115*	*50-150*				
Client ID:	**MW8-6-13-23**					
Laboratory ID:	06-191-06					
Diesel Range Organics	**ND**	0.22	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.22	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*123*	*50-150*				

Date of Report: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW9-6-13-23**					
Laboratory ID:	06-191-07					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*117*	*50-150*				
Client ID:	**MW2-6-13-23**					
Laboratory ID:	06-191-08					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*110*	*50-150*				

Date of Report: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0619W1					
Diesel Range Organics	**ND**	0.16	NWTPH-Dx	6-19-23	6-19-23	
Lube Oil Range Organics	**ND**	0.16	NWTPH-Dx	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	SB0619W1										
	ORIG	DUP									
Diesel Fuel #2	**0.449**	**0.428**	NA	NA		NA		NA	5	40	
Surrogate:											
o-Terphenyl						*100*	*98*	*50-150*			

Date of Report: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

VOLATILE ORGANICS EPA 8260D

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW6-6-13-23**					
Laboratory ID:	06-191-01					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	1.1	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*75-127*				
Toluene-d8	*103*	*80-127*				
4-Bromofluorobenzene	*99*	*78-125*				
Client ID:	**MW5-6-13-23**					
Laboratory ID:	06-191-02					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	1.3	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*75-127*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				
Client ID:	**MW4-6-13-23**					
Laboratory ID:	06-191-03					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	0.97	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*75-127*				
Toluene-d8	*102*	*80-127*				
4-Bromofluorobenzene	*100*	*78-125*				

Date of Report: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

VOLATILE ORGANICS EPA 8260D

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW3A-6-13-23**					
Laboratory ID:	06-191-04					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	1.3	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*75-127*				
Toluene-d8	*103*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				
Client ID:	**MW7-6-13-23**					
Laboratory ID:	06-191-05					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	1.2	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*111*	*75-127*				
Toluene-d8	*103*	*80-127*				
4-Bromofluorobenzene	*99*	*78-125*				
Client ID:	**MW8-6-13-23**					
Laboratory ID:	06-191-06					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	1.1	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*75-127*				
Toluene-d8	*102*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				

Date of Report: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

VOLATILE ORGANICS EPA 8260D

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW9-6-13-23**					
Laboratory ID:	06-191-07					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*109*	*75-127*				
Toluene-d8	*103*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				
Client ID:	**MW2-6-13-23**					
Laboratory ID:	06-191-08					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	2.3	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*75-127*				
Toluene-d8	*102*	*80-127*				
4-Bromofluorobenzene	*98*	*78-125*				
Client ID:	**MW1-6-13-23**					
Laboratory ID:	06-191-09					
Vinyl Chloride	ND	0.20	EPA 8260D	6-27-23	6-27-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-27-23	6-27-23	
Trichloroethene	ND	0.20	EPA 8260D	6-27-23	6-27-23	
Tetrachloroethene	1.4	0.20	EPA 8260D	6-27-23	6-27-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*112*	*75-127*				
Toluene-d8	*105*	*80-127*				
4-Bromofluorobenzene	*100*	*78-125*				

Date of Report: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0619W1					
Vinyl Chloride	ND	0.20	EPA 8260D	6-19-23	6-19-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Trichloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Tetrachloroethene	ND	0.20	EPA 8260D	6-19-23	6-19-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*75-127*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*97*	*78-125*				
Laboratory ID:	MB0627W1					
Vinyl Chloride	ND	0.20	EPA 8260D	6-27-23	6-27-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	6-27-23	6-27-23	
Trichloroethene	ND	0.20	EPA 8260D	6-27-23	6-27-23	
Tetrachloroethene	ND	0.20	EPA 8260D	6-27-23	6-27-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*116*	*75-127*				
Toluene-d8	*105*	*80-127*				
4-Bromofluorobenzene	*101*	*78-125*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0619W1									
	SB	SBD	SB	SBD	SB	SBD				
Vinyl Chloride	**10.4**	**9.69**	10.0	10.0	104	97	66-133	7	15	
(cis) 1,2-Dichloroethene	**9.98**	**9.58**	10.0	10.0	100	96	84-130	4	15	
Trichloroethene	**9.88**	**9.60**	10.0	10.0	99	96	80-122	3	18	
Tetrachloroethene	**10.9**	**10.5**	10.0	10.0	109	105	80-125	4	15	
Surrogate:										
Dibromofluoromethane					*101*	*100*	*75-127*			
Toluene-d8					*102*	*103*	*80-127*			
4-Bromofluorobenzene					*101*	*100*	*78-125*			
Laboratory ID:	SB0627W1									
	SB	SBD	SB	SBD	SB	SBD				
Vinyl Chloride	**8.85**	**8.77**	10.0	10.0	89	88	66-133	1	15	
(cis) 1,2-Dichloroethene	**10.4**	**10.5**	10.0	10.0	104	105	84-130	1	15	
Trichloroethene	**9.54**	**9.75**	10.0	10.0	95	98	80-122	2	18	
Tetrachloroethene	**9.68**	**10.0**	10.0	10.0	97	100	80-125	3	15	
Surrogate:										
Dibromofluoromethane					*114*	*113*	*75-127*			
Toluene-d8					*107*	*106*	*80-127*			
4-Bromofluorobenzene					*104*	*104*	*78-125*			

Date of Report: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW6-6-13-23**					
Laboratory ID:	06-191-01					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW5-6-13-23**					
Laboratory ID:	06-191-02					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW4-6-13-23**					
Laboratory ID:	06-191-03					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW3A-6-13-23**					
Laboratory ID:	06-191-04					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	

Date of Report: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW7-6-13-23**					
Laboratory ID:	06-191-05					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW8-6-13-23**					
Laboratory ID:	06-191-06					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**1.1**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW9-6-13-23**					
Laboratory ID:	06-191-07					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	
Client ID:	**MW2-6-13-23**					
Laboratory ID:	06-191-08					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	

Date of Report: June 28, 2023
Samples Submitted: June 15, 2023
Laboratory Reference: 2306-191
Project: E2023/0607; 1201 S 1st St Yakima

TOTAL METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0619WM1					
Arsenic	**ND**	3.3	EPA 200.8	6-19-23	6-19-23	
Cadmium	**ND**	4.4	EPA 200.8	6-19-23	6-19-23	
Chromium	**ND**	11	EPA 200.8	6-19-23	6-19-23	
Lead	**ND**	1.1	EPA 200.8	6-19-23	6-19-23	
Laboratory ID:	MB0620W1					
Mercury	**ND**	0.50	EPA 7470A	6-20-23	6-20-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	06-191-01									
	ORIG	DUP								
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	06-191-01									
Mercury	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	06-191-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	**116**	**112**	111	111	ND	**105**	**101**	75-125	4	20
Cadmium	**116**	**114**	111	111	ND	**104**	**103**	75-125	2	20
Chromium	**112**	**108**	111	111	ND	**101**	**98**	75-125	4	20
Lead	**104**	**103**	111	111	ND	**94**	**93**	75-125	1	20
Laboratory ID:	06-191-01									
Mercury	**5.68**	**5.85**	6.25	6.25	ND	**91**	**94**	75-125	3	20

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

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

Chain of Custody

Page 1 of 1

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

Company: BMEC
Project Number: E2023 0607
Project Name: 1201 S 1st St Yakima
Project Manager: P. Trabusiner / B. Bergeron
Sampled by: C. Lynch

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

Laboratory Number: 06-191

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (SG Clean-up☐)	Volatiles 8260	Halogenated Volatiles 8260 PCE, TCE, VC, (cis) 1,2-DCE	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 MTCA	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	MW6-6-13-23	6/13/23	0940	H_2O	7		*		X		X								X				
2	MW5-6-13-23		0925	H_2O					X		X								X				
3	MW4-6-13-23		1000	H_2O					X		X								X				
4	MW3A-6-1323		1200	H_2O					X		X								X				
5	MW7-6-13-23		1330	H_2O					X		X								X				
6	MW8-6-13-23		1425	H_2O	~~7~~ 6				X		X								X				
7	MW9-6-13-23		1545	H_2O	7				X		X								X				
8	MW2-6-13-23		1615	H_2O	7				X		X								X				
9	MW1-6-13-23		1640	H_2O	~~4~~ 3				~~X~~ NO PP		X								~~X~~	NO DP			

	Signature	Company	Date	Time
Relinquished	Caris Lynch	BMEC	6/14/23	0900
Received	~~X~~	OSE	6/15/23	1115
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Caris Lynch
509 386-2031

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

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

June 23, 2023

Peter Trabusiner
Blue Mountain Environmental, Inc.
1500 Adair Drive
Richland, WA 99352

Re: Analytical Data for Project E2023/0607; 1201 S 1st St Yakima
Laboratory Reference No. 2306-250

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on June 20, 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,

David Baumeister
Project Manager

Enclosures

Date of Report: June 23, 2023
Samples Submitted: June 20, 2023
Laboratory Reference: 2306-250
Project: E2023/0607; 1201 S 1st St Yakima

Case Narrative

Samples were collected on June 13, 2023 and received by the laboratory on June 20, 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: June 23, 2023
Samples Submitted: June 20, 2023
Laboratory Reference: 2306-250
Project: E2023/0607; 1201 S 1st St Yakima

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW1-6-13-23**					
Laboratory ID:	06-250-01					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	6-21-23	6-21-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	6-21-23	6-21-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				

Date of Report: June 23, 2023
Samples Submitted: June 20, 2023
Laboratory Reference: 2306-250
Project: E2023/0607; 1201 S 1st St Yakima

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0621W1					
Diesel Range Organics	**ND**	0.16	NWTPH-Dx	6-21-23	6-21-23	
Lube Oil Range Organics	**ND**	0.16	NWTPH-Dx	6-21-23	6-21-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	06-246-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	40	
Lube Oil Range Organics	**0.209**	**0.172**	NA	NA		NA		NA	19	40	
Surrogate:											
o-Terphenyl						*108*	*104*	*50-150*			

Date of Report: June 23, 2023
Samples Submitted: June 20, 2023
Laboratory Reference: 2306-250
Project: E2023/0607; 1201 S 1st St Yakima

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW1-6-13-23**					
Laboratory ID:	06-250-01					
Arsenic	**9.3**	3.3	EPA 200.8	6-21-23	6-21-23	
Cadmium	**ND**	4.4	EPA 200.8	6-21-23	6-21-23	
Chromium	**73**	11	EPA 200.8	6-21-23	6-21-23	
Lead	**11**	1.1	EPA 200.8	6-21-23	6-21-23	
Mercury	**ND**	0.50	EPA 7470A	6-22-23	6-22-23	

Date of Report: June 23, 2023
Samples Submitted: June 20, 2023
Laboratory Reference: 2306-250
Project: E2023/0607; 1201 S 1st St Yakima

TOTAL METALS
EPA 200.8/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0621WM1					
Arsenic	**ND**	3.3	EPA 200.8	6-21-23	6-21-23	
Cadmium	**ND**	4.4	EPA 200.8	6-21-23	6-21-23	
Chromium	**ND**	11	EPA 200.8	6-21-23	6-21-23	
Lead	**ND**	1.1	EPA 200.8	6-21-23	6-21-23	
Laboratory ID:	MB0622WM1					
Mercury	**ND**	0.50	EPA 7470A	6-22-23	6-22-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	06-191-02									
	ORIG	DUP								
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	06-191-04									
Mercury	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	06-191-02									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	**118**	**118**	111	111	ND	**106**	**106**	75-125	0	20
Cadmium	**111**	**110**	111	111	ND	**100**	**99**	75-125	1	20
Chromium	**112**	**111**	111	111	ND	**101**	**100**	75-125	1	20
Lead	**101**	**99.6**	111	111	ND	**91**	**90**	75-125	2	20
Laboratory ID:	06-191-04									
Mercury	**11.4**	**11.7**	12.5	12.5	0.473	**87**	**90**	75-125	3	20

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

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

Chain of Custody

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

Company: BMEL
Project Number: E2023d607
Project Name: 1201 S 1st St Yakima
Project Manager: PTrabusiner / BBergeron
Sampled by: C Lynch

Turnaround Request (in working days)
(Check One)
[ ] Same Day [ ] 1 Day
[ ] 2 Days [ ] 3 Days
[X] Standard (7 Days)
[ ] _____ (other)

Laboratory Number: 06-250

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021 8260)	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	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 ~~Dissolved~~ MTCA Filtered in lab	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	MW1-6-13-23	6/13/23	1640	H_2O	3				X										X	X			

	Signature	Company	Date	Time
Relinquished		BMEL	6/19/23	1143
Received		OSE	6/20/23	1315
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

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