A & M Engineering and
Environmental Services, Inc.
Consulting - Design - Construction - Remediation

April 7, 2022
Project 2004-0003

Ms. Jing Song
Washington Department of Ecology -
Toxic Cleanup Program, NWRO
15700 Dayton Avenue North
Shoreline, Washington 98133

Re: Quarterly Groundwater Monitoring and Remedial Operations Report – March 2022, Former Provisioner's Express, Inc. Facility, 2102 West Valley Highway North, Auburn, Washington, Ecology Facility ID 91612121, Cleanup Site ID 6847, VCP Project No. 3206

Dear Ms. Song:

A&M Engineering and Environmental Services, Inc. (A&M), on behalf of Commerce Road Terminals, LLC (CRT), has prepared this groundwater monitoring and remedial operations report to provide the results of quarterly groundwater monitoring and remedial operations completed at the former Provisioner's Express, Inc. (Provisioner's) facility (Site) located at 2102 West Valley Highway North in Auburn, Washington. This report presents the details and findings of the groundwater monitoring activities conducted at the Site on March 21, 2022 for the January through March 2022 monitoring period.

SITE DESCRIPTION

The former Provisioner's facility is located at 2102 West Valley Highway North, Auburn, Washington, east of the intersection of 22nd street Northwest and West Valley Highway North, northwest quarter of Section 12, Township 21 North, Range 4 East, Willamette Meridian in King County, Washington (Figure 1). The property is listed as Tax Parcel No. 1221049034 and the zoning is designated M-1, Light Industrial.

The facility is currently operated by Estes Express Lines (Estes), a motor freight transportation company. Estes uses the facility as a trucking terminal that includes a maintenance garage. There are currently no active underground storage tanks (USTs) on the facility.

The property is fully paved or covered by buildings and has a storm water conveyance system consisting of catch basins that are connected to an oil/water separator through underground piping with discharge to the municipal sewer system. Pavement is primarily asphalt with concrete pads surrounding the on-Site buildings and loading bays.

The topography of the property is relatively flat with an approximate elevation of 65 feet above mean sea level (msl). Mill Creek and the White River Park Wetland System are the nearest surface water bodies and are located approximate 200 feet to the southeast of the Site. A drainage ditch flowing to the White River Park Wetland System is present near the south property boundary, approximately 40 feet south of the Site. The property and the Site are separated from Mill Creek and the White River Park Wetland System by an adjoining property. The nearest major surface water body, the Green River, is located approximately 1.7 miles east of the Site.

The property contains a single Washington Department of Ecology (Ecology) Model Toxics Control Act (MTCA) site that is defined by the lateral and vertical extent of soil and groundwater impacted by diesel and oil range petroleum hydrocarbons (TPH-d and TPH-o) at concentrations greater than applicable MTCA Method A Cleanup Levels (CULs). Under the MTCA program, the Facility Site Identification No. is 91612121, Cleanup Site Identification No. is 6847, and in July 2018 the Voluntary Cleanup Program (VCP) number was change from NW2532 to VCP No. 3206 when CRT became responsible for the Site cleanup.

BACKGROUND

Soil and groundwater at the Site were impacted by petroleum hydrocarbon releases from conveyance piping related to a 550-gallon used oil UST located near the northwest corner of the truck maintenance building (Figure 2). The UST and approximately 350 cubic yards of petroleum-contaminated soil (PCS) were removed for disposal off-Site, and four monitoring wells, designated MW-1, MW-2, MW-3, and MW-4, were constructed in December 1998 (EMR, 1999).

In January 2000, Ecology issued a conditional No Further Action (NFA) determination for the Site. The NFA contained the condition that quarterly groundwater monitoring and reporting be continued until the *site demonstrates sustained, continuous compliance with Model Toxics Control Act (MTCA) Groundwater Cleanup Levels (CULs) for at least one year.* The NFA also stipulated that analytical results for groundwater compliance *shall include BTEX (benzene, toluene, ethylbenzene, and xylene), diesel, and heavy oils*. Available records indicate that the monitoring wells were sampled approximately every quarter from December 1998 until October 2002.

In November 2002, the Site owner petitioned for a full NFA determination based on three (3) years of data demonstrating that benzene groundwater concentrations greater than MTCA Method A CULs was confined to the area on the north side of the maintenance building around MW-2. At that time, the sample collected from MW-2 had a gasoline range petroleum hydrocarbon (TPH-g) concentration of 180 micrograms per liter (µg/L) and a benzene concentration of 12.0 µg/L. The reported TPH-g concentration was less than the MTCA Method A CUL of 800 µg/L. However, the benzene concentration exceeded the MTCA Method A CUL of 5 µg/L. No other BTEX compounds, TPH-d, or TPH-o were reported in the sample collected from MW-2.

Reported contaminant concentrations for the samples collected from the remaining monitoring wells were also below MTCA Method A CULs.

Groundwater sampling was discontinued in late 2002 and the Site did not receive a full NFA determination, due to the benzene concentration exceeding the MTCA Method A CUL in the samples from MW-2. Records indicate that the Site was subsequently dropped from Ecology's VCP due to inactivity.

The Site re-entered the VCP in August 2011 and was assigned VCP No. NW 2532. Quarterly groundwater sampling of the four on-Site wells was resumed in August 2011. On March 26, 2012, Ecology notified the Site owner that the January 2000 conditional NFA determination was rescinded because the benzene concentrations in groundwater samples collected from well MW-2 remained greater than the MTCA Method A CUL and the previous groundwater remedy (excavation of petroleum impacted soils followed by groundwater monitoring) did not achieve and maintain compliance with the applicable MTCA Method A CULs.

On November 28, 2012, a 12,000-gallon diesel fuel UST was decommissioned by removal south of the truck maintenance building (Figure 2). According to available information, the UST was emptied and removed from service in 1998 when the 550-gallon waste oil UST was decommissioned and had not been operated between 1998 and 2012. EPI personnel oversaw the UST decommissioning activities and collected nine (9) soil samples and a water sample from the excavation. The diesel contaminated water was reported in the water from the excavation and was reportedly rinseate from the UST that was spilled as the UST was removed from the excavation due to improper rigging and hoisting. EPI prepared the *Underground Storage Tank Site Assessment Report* (EPI, 2013a), dated January 4, 2013, for submittal to Ecology's Underground Storage Tank Division.

In an opinion letter dated April 22, 2013, Ecology requested installation of two additional monitoring wells designated MW-5 and MW-6. Well MW-5 was installed at the southwest corner of the truck maintenance building, near the on-Site oil/water separator (OWS), to monitor groundwater downgradient of MW-1. Well MW-6 was installed at the southeast corner of the former 12,000-gallon diesel UST excavation to evaluate groundwater quality based on the reported petroleum hydrocarbon concentrations in a water sample collected from the in the UST excavation (EPI, 2013b).

In October 2013, EPI performed a site investigation at Ecology's request. The investigation included advancing nine (9) direct-push soil borings DP-1 through DP-9 (Figure 2); five were located around MW-1 and four were located downgradient of MW-6. Laboratory analytical results indicated soil impacts around MW-1 were limited to location DP-3, which was immediately adjacent to the exterior wall of the northwest corner of the Truck Maintenance Building. This result was anticipated because a small quantity of impacted soil was left in place immediately under the truck maintenance building footings to maintain geotechnical stability during impacted soil

excavation. None of the remaining soil samples had detections for petroleum hydrocarbons (EPI, 2013b).

On August 26, 2016, EPI directed the advancement of two soil borings, designated BH-1 and BH-2 for soil sample collection, and construction of two conditional point of compliance (POC) monitoring wells, designated MW-7 and MW-8. BH-1 and BH-2 were advanced east of the former 12,000-gallon diesel UST to evaluate subsurface conditions immediately downgradient of the former UST. Well MW-7 was installed southeast and downgradient of the former 12,000-gallon diesel UST and existing well MW-6. Well MW-8 was installed northeast of MW-7, also downgradient of the former 12,000-gallon diesel UST and existing well MW-6. The purpose of the POC monitoring wells was to monitor groundwater conditions downgradient of the former 12,000-gallon diesel UST (EPI, 2017a). The soil boring and monitoring wells locations are presented on Figure 2.

On August 11, 2017, monitoring well MW-9 was installed by Holt Services near the northwest corner of the truck maintenance building (Figure 2). The additional well was requested by CRT as part of their environmental due diligence prior to their purchase of the property. Historical direct-push sampling data from this location indicated TPH-d and TPH-o was above MTCA Method A in a groundwater sample collected from the boring (EPI, 2017b).

On May 17, 2018, during collection of depth-to-water measurements, asphalt sealant was encountered in the monument for MW-8. After removal of the asphalt sealant, it was discovered that the locking expansion plug for the monitoring well was loose, and that asphalt sealant had seeped past the expansion plug. Visible material was skimmed from the well surface and the monitoring well was purged of approximately 30 gallons of groundwater prior to sampling. TPH-d and TPH-o were reported above MTCA Method A cleanup levels in the groundwater sample collected on May 17, 2018.

On June 5, 2018, Environmental Technologies Group, Inc. (ETG) cleaned the casing for monitoring well MW-8, using clean absorbent pads to wipe the well casing. Following cleaning, the well was developed by extracting water with a development pump beginning at the top of the groundwater surface and lowering the pump as groundwater dropped in elevation. This process was repeated approximately 15 times until the purge water no longer changed in color between purging events. A total of 25 gallons of groundwater was removed from the well. The well was resampled following cleaning and development. Though significant reduction in TPH-d and TPH-o concentrations were reported, laboratory analytical results still reported TPH-d and TPH-o above MTCA Method A cleanup levels in the groundwater sample.

On September 17, 2018, ETG submitted *Groundwater Assessment Work Plan* (ETG, 2018) proposing the construction of a new groundwater monitoring well downgradient of MW-8. Ecology approved the groundwater monitoring well location in an Opinion Letter dated December 20, 2018 (Ecology, 2018).

On January 25, 2019, consistent with the Ecology approved *Groundwater Assessment Work Plan* (ETG, 2018), groundwater monitoring well MW-10 was constructed downgradient of MW-8 and surveyed. The monitoring well was developed and sampled during the first quarter groundwater monitoring event in February 2019. Laboratory analytical results indicated TPH-g, TPH-d, TPH-o, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), carcinogenic polynuclear aromatic hydrocarbons (cPAHs) including naphthalene, 1-methyl naphthalene and 2-methyl naphthalene, and total lead were not reported at, or above, laboratory method reporting limits (MRLs) in the groundwater sample collected from the well.

In February 2020, following discussions with Ecology, groundwater monitoring was modified from a quarter frequency to a semi-annual frequency with events occurring during first and third quarter of the calendar year, the high and low groundwater elevation periods of the year. Groundwater monitoring was also modified to only include groundwater sample collection from well MW-9, as prior groundwater monitoring indicated samples collected from all other wells were compliant with MCTA Method A CULs.

Remedial System

In 2014, because groundwater data indicated that natural attenuation of the residual TPH-d and TPH-o impacts was not occurring at a rate that would result in a reasonable restoration timeframe, an active groundwater remediation system was designed, installed, and operated for the area around MW-1 as described in the following.

In May 2014, EPI installed three shallow air injection (AI) wells at locations upgradient of MW-1 (Figure 2) to add dissolved oxygen (DO) to the groundwater. The increased DO concentrations in groundwater would stimulate existing aerobic bacteria by providing the oxygen necessary for those bacteria to metabolize dissolved petroleum hydrocarbons in groundwater at a higher rate.

Each of the shallow AI well was equipped with a 1-foot section of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and set below groundwater at approximately 14 to 15 feet bgs. Pressurized air pumped through the C-Sparger® screens forces air, containing oxygen, into groundwater as microbubbles, greatly increasing the surface area of the bubbles for more efficient oxygenation of the groundwater. The remaining well annulus was sealed using hydrated bentonite chips and the surface was completed with 8-inch diameter flush-mount steel monuments set in concrete.

An appropriately sized rotary vane air compressor was installed in the fenced area at the north end of the truck maintenance building to provide air to the shallow air injection wells. The shallow air injection wells are connected to the compressor using 1-inch diameter polyvinyl chloride (PVC) piping installed below grade to each of the well monuments. PVC air supply lines were installed in trenches that were appropriately backfilled and patched with asphalt at the surface to match the surrounding grade.

The remediation system was started and tested on May 15, 2014 after quarterly groundwater monitoring was completed. An electrical issue with the compressor's motor caused the air injection remediation system to shut down in August 2014. Analytical results from the August 2014 monitoring event indicated that TPH-d and TPH-o concentrations were not reported, at or above laboratory MRLs in the sample from MW-1. Based on the favorable result, remediation system operation was suspended at MW-1 from August 2014 to April 2015 so that groundwater data could be collected to demonstrate that groundwater was remediated to concentrations below Ecology MTCA Method A Groundwater CULs, and to provide data intended to demonstrate that contaminant concentration rebound was not occurring.

The positive response to operation of the air injection remediation system at MW-1 demonstrated that expansion to remediate impacted groundwater at MW-6 was warranted. In January 2015, EPI installed three additional shallow AI wells at locations upgradient of MW-6 (Figure 2). The three wells are constructed like the air injection wells at MW-1, equipped with 1-foot lengths of Kerfoot Technologies C-Sparger® screen set in a sand filter pack and set below groundwater at approximately 14 to 15 feet bgs.

Operation of the expanded air injection remediation system at MW-6 was initiated on April 3, 2015. The expanded system at MW-6 ran from April until June 2015 when a new electrical issue with the compressor's motor caused the air injection remediation system to shut down, requiring replacement.

Repairs to the air injection system were completed and the remediation system was restarted on February 3, 2016. However, the system was not operational during the June 21, 2016 groundwater monitoring event, and inspection revealed that the compressor motor was damaged due to overheating. EPI was informed that the system had been off for several weeks prior to the monitoring event.

EPI evaluated the potential reasons for the compressor motor overheating and the likely cause was low voltage power throughout the area, which was measured at 208 volts at the air injection system panel. The actual voltage was lower than the design voltage of 220-230 volts. EPI concluded that although the compressor motor was rated to operate at 208 volts, voltage fluctuations below 208 volts caused high amperage on the motor, resulting in excessive heat that eventually burned-out the motor.

In November 2016, EPI installed a 1.5 horsepower, Republic Manufacturing, Model DRT-425 rotary vane compressor with a 208-volt-specific motor. Compressor operation was started on November 16, 2016. The system was operational before, and after the December 20, 2016 groundwater monitoring event. Sometime between the December 20, 2016 monitoring event and a Site visit by EPI personnel on March 20, 2017, the air injection system shut down. On March 20, 2017, EPI personnel inspected the compressor and determined that the rotary vanes were destroyed and required

replacement. The compressor repair work was completed under warranty at the manufacturer's facility.

The repaired compressor was reconnected and returned to service on June 19, 2017. Both areas of the air injection system MW-1 and MW-6, were back in operation following the completion of groundwater monitoring on June 19, 2017.

Since installation in 2015, air injection well AI-6, located near monitoring well MW-6, consistently had little to no air flow. EPI tested, evaluated, and attempted to increase air flow through this point with no measurable improvement and determined that the well was plugged and unrepairable. On June 26, 2017, Holocene Drilling, under EPI direction, decommissioned AI-6 per Ecology requirements and replaced it with air injection well AI-6R.

The air injection system was inspected during a Site visit by EPI on December 14, 2017, and again during quarterly monitoring on December 20, 2017 and was operating as designed with no excessive heat or mechanical issues noted. EPI returned to the property on January 2, 2018 to re-sample wells MW-4, MW-6, and MW-6 and noted that the air compressor was not running. The compressor was replaced, and the air injection system re-started (EPI, 2018).

The air injection system continued to operate after repair in January 2018, with the exception of maintenance events and prior to groundwater monitoring events. Based on the November 2018 monitoring results, air injection system operation was suspended on December 6, 2018 and remained inactive until February 2021.

Based on the September 2020 semi-annual groundwater monitoring results, it was determined that operation of the air injection system would be beneficial in increasing the rate of degradation for residual contaminants in the vicinity of MW-9. On December 15, 2020, an attempt was made to restart the air injection system. It was discovered that the injection blower had been damaged by an attempt theft of the equipment. A new injection blower was installed on February 9, 2021, and the air injection system restarted. All six (6) air injection wells were opened and the operating pressure set to approximately 11 pounds per square inch (psi).

On July 29, 2021, the air injection system was shutdown prior to the August 23, 2021, groundwater monitoring event. On August 23, 2021, following the groundwater sampling event the system was inspected and maintained. The AS System was restarted after system maintenance. The AS System condensate was drained, and flow and pressure data collected and recorded on an Air Sparing Treatment System Data Sheet (TSDS). A copy of the TSDS for the event is provided as Attachment A.

On August 30, 2021, following the receipt of groundwater monitoring analytical results, the AS System was shutdown.

GROUNDWATER MONITORING

On March 21, 2022, A&M conducted a quarterly groundwater monitoring event for the first quarter 2022 monitoring period. The monitoring event included collection of depth-to-water measurements from monitoring wells MW-2 through MW-6, MW-8, MW-9, and MW-10 and collection of a primary and duplicate groundwater sample from monitoring well MW-9. A depth-to-water measurements were not collected from MW-1 due to the presence of a solid waste dumpster over the monitoring well location and MW-7 due to a trailer hitch over the monitoring well location. Depth-to-water measurements and groundwater elevation data are provided in Table 1.

Monitoring Procedures

During the monitoring event, groundwater samples were collected utilizing "low-flow" sampling techniques in general accordance with the United States Environmental Protection Agency (USEPA) *Low-Flow Groundwater Monitoring Procedures* (USEPA, 1996). Prior to sampling, depth-to-water measurements were used to determine the static water level in each well. During purging, field parameters including: pH, conductivity, temperature, oxidation-reduction (Redox), and dissolved oxygen were measured utilizing a flow-through cell. A groundwater sample was collected after at least three sequential field parameter readings had stabilized to within the limits specified in the USEPA procedure and the water level was below the top of the screened interval. Field sampling data, including depth-to-water at the completion of sampling were recorded on a field sampling data sheet (FSDS). A copy of the FSDS is provided as Attachment A.

Groundwater samples were collected from disposable discharge tubing connected to the peristaltic pump and transferred directly to laboratory-supplied containers with as little agitation as possible. Groundwater samples were labeled with a unique blind code and delivered in an iced cooler using chain-of-custody (COC) procedure to Pace Analytical Services, LLC (PACE), a State of Washington certified laboratory (No. C486), in Minneapolis, Minnesota.

All groundwater samples were analyzed for TPH-d and TPH-o by Ecology Method NWTPH-Dx. For quality assurance/quality control (QA/QC) purposes, a duplicate groundwater sample was also collected from monitoring well MW-9.

All purge water was stored on-Site in a United States Department of Transportation (USDOT) approved 55-gallon drum pending proper off-Site disposal.

Groundwater Elevation and Flow Direction

Based on the depth-to-water measurements collected on March 21, 2022, from the eight (8) monitoring wells, a groundwater elevation contour map was generated for the Site (Figure 3) using field measurements and data from well surveys completed on September 19, 2017 (MW-1 through MW-9) and February 5, 2019 (MW-10).

Groundwater elevation data indicated a predominantly southeastern groundwater flow direction, consistent with prior monitoring events The horizontal groundwater gradient was calculated to be less than 0.01 feet per foot (ft/ft) during the March 21, 2022 groundwater monitoring event.

Groundwater Analytical Results

A summary of the laboratory analytical results for the samples collected on March 21, 2022, from monitoring well MW-9 are provided in Table 2 along with Ecology MTCA Method A CULs for comparison. TPH-d and TPH-o analytical results are also presented on Figure 4. A copy of the laboratory analytical report is provided as Attachment B.

Analytical results for groundwater samples collected on March 21, 2022, from monitoring well MW-9 indicated the following:

Diesel Range Hydrocarbons

- TPH-d was reported at estimated concentrations above the method detection limit (MDL), but below the laboratory method reporting limit (MRL), in the primary groundwater sample collected from monitoring well MW-9 at a concentration of 130 µg/L. The reported estimated concentration, as well as the laboratory MRL, was below the Ecology MTCA Method A CUL.

  TPH-d was not reported at, or above, the laboratory MRL in the duplicate groundwater sample collected from monitoring well MW-9.

Oil Range Hydrocarbons

- TPH-o was not reported at, or above, the laboratory MRL in the primary and duplicate groundwater samples collected from monitoring well MW-9.

Total Diesel and Oil Range Hydrocarbons

- Total TPH was reported at estimated concentrations above the MDL, but below the laboratory MRL, in the primary groundwater sample collected from monitoring well MW-9 at a concentration of 130 µg/L from the TPH-d analyses, below the Ecology MTCA Method A CUL.

  Total TPH was not reported at, or above, the laboratory MRL in the duplicate groundwater sample collected from monitoring well MW-9.

GROUNDWATER ANALYSIS TREND CHARTS

In Ecology's Opinion Letter dated December 20, 2018 (Ecology, 2018) groundwater analysis trend charts were requested for monitoring wells MW-1, MW-3, MW-6, MW-8, and MW-9. Currently, only MW-9 in being monitored. A copy of the groundwater

analysis trend chart for MW-9 is provided as Attachment C. The trend chart indicates the following:

- Laboratory analyses for samples collected from MW-9 indicate an overall declining trend since well installation in September 2017. TPH-o has never been reported in groundwater samples collected from MW-9 at concentrations above the MRL. Groundwater quality data for TPH-d were compliant with Ecology MTCA Method A during the August and November 2021, and the March 2021 monitoring events.

REMEDIAL SYSTEM OPERATION

Based on the March 21, 2022, groundwater monitoring results, air injection system operation will continue to be suspended. The air injection system is not scheduled to operate at this time. Based on the groundwater monitoring event results, quarterly compliance groundwater monitoring will continue in second quarter 2022.

SCHEDULED ACTIONS

The next groundwater monitoring event will occur in May/June 2022 and will included collection of depth-to-water measurements from monitoring wells MW-1 through MW-10, and a groundwater sample from monitoring well MW-9. The monitoring event will represent the fourth consecutive groundwater compliance monitoring event. Following completion of the groundwater monitoring event, a groundwater monitoring report will be prepared and submitted to Ecology.

If there are any questions regarding this report, please call.

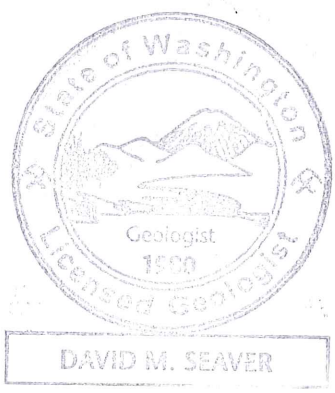
Sincerely,

A&M Engineering and Environmental Services, Inc.

Daniel J. Landry
Senior Project Manager

David M. Seaver, L.G.
Senior Geologist

Attachments: References
Limitations
Tables 1 and 2
Figures 1, 2, 3, and 4
Attachment A, B, and C



REFERENCES

Ecology. 2018. Opinion Letter – Further Action at the Following Site: Site Name: Provisioner's Express Inc., Site Address: 2102 West Valley Highway North, Auburn, Washington, 98001, Facility/Site No.: 91612121, VCP Project No.: 3206, Cleanup Site ID: 6847. State of Washington Department of Ecology. December 20.

EMR. 1999. *Remedial Investigation/Feasibility Study*, Provisioners Express Auburn Facility, 2102 West Valley Highway, Auburn, Washington. Environmental Management Resources, Inc. March.

EPI. 2013a. *Underground Storage Tank Site Assessment Report,* Estes Express Facility, 2102 West Valley Highway North, Auburn, Washington. Environmental Partners, Inc. January 4.

EPI. 2013b. *Phase II Environmental Site Assessment Report,* Estes West Express Trucking Facility, 2102 West Valley Highway North, Auburn, Washington. Environmental Partners, Inc. December 9.

EPI. 2017a. *September and December 2016 Groundwater Sampling Report – Twenty and Twenty-First Rounds*, Estes West Express Trucking Facility, 2102 West Valley Highway North, Auburn, Washington. Environmental Partners, Inc. February 24.

EPI. 2017b. *September 2017 Groundwater Sampling Report – Twenty-Fourth Round*, Estes West Express Trucking Facility, 2102 West Valley Highway North, Auburn, Washington. Environmental Partners, Inc. October 3.

EPI. 2018. *December 2017 – January 2018 Groundwater Sampling Report – Twenty-Fifth Round*, Estes West Express Trucking Facility, 2102 West Valley Highway North, Auburn, Washington. Environmental Partners, Inc. February 21.

ETG. 2018. *Groundwater Assessment Work Plan*, Former Provisioner's Express, Inc. Facility, 2102 West Valley Highway North, Auburn, Washington, Ecology Facility ID 91612121, Cleanup Site ID 6847, VCP Project No. 3206. Environmental Technologies Group, Inc. September 17.

ETG. 2019. *Response to Ecology Opinion Letter*, Former Provisioner's Express, Inc. Facility, 2102 West Valley Highway North, Auburn, Washington, Ecology

Facility ID 91612121, Cleanup Site ID 6847, VCP Project No. 3206. Environmental Technologies Group, Inc. March 28.

USEPA. 1996. *Low-Flow Groundwater Monitoring Procedures*, USEPA/540/S-95/504, United States Environmental Protection Agency. April.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

The purpose of a geologic/hydrogeologic study is to reasonably characterize existing site conditions based on the geology/hydrogeology of the area. In performing such a study, it is understood that a balance must be struck between a reasonable inquiry into the site conditions and an exhaustive analysis of each conceivable environmental characteristic. The following paragraphs discuss the assumptions and parameters under which such an opinion is rendered.

No investigation is thorough enough to describe all geologic/hydrogeologic conditions of interest at a given site. If conditions have not been identified during the study, such a finding should not therefore be construed as a guarantee of the absence of such conditions at the site, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

We are unable to report on or accurately predict events that may change the site conditions after the described services are performed, whether occurring naturally or caused by external forces. We assume no responsibility for conditions we were not authorized to evaluate, or conditions not generally recognized as predictable when services were performed.

Geologic/hydrogeologic conditions may exist at the site that cannot be identified solely by visual observation. Where subsurface exploratory work was performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations.

Table 1
Groundwater Elevation Summary

Well Number/ TOC Elevation	Date of Measurement	Dissolved Oxygen (mg/L)	DTW (feet)	SWL (feet)	Change in SWL (feet)
MW-1					
100.51	12/23/98	--	5.32	95.19	--
	01/05/99	--	5.01	95.50	0.31
	01/20/99	--	4.95	95.56	0.06
	02/02/99	--	5.01	95.50	-0.06
60.77	08/12/11	--	6.12	54.65	--
	11/11/11	--	5.42	55.35	0.70
	02/10/12	--	4.76	56.01	0.66
	05/17/12	--	5.35	55.42	-0.59
	08/28/12	--	6.28	54.49	-0.93
	11/15/12	--	4.99	55.78	1.29
	02/14/13	--	5.22	55.55	-0.23
	05/16/13	--	5.42	55.35	-0.20
	08/14/13	0.21	6.17	54.60	-0.75
	11/25/13	0.29	5.06	55.71	1.11
	02/20/14	0.25	3.62	57.15	1.44
	05/15/14	0.41	4.76	56.01	-1.14
	08/14/14	7.69	7.32	53.45	-2.56
	11/24/14	0.67	5.22	55.55	2.10
	03/31/15	0.45	4.99	55.78	0.23
	06/29/15	0.15	6.23	54.54	-1.24
	09/28/15	0.40	6.37	54.40	-0.14
	03/03/16	10.71	2.18	58.59	4.19
	06/21/16	4.82	5.82	54.95	-3.64
	09/16/16	0.16	5.99	54.78	-0.17
	12/20/16	7.69	4.92	55.85	1.07
	03/24/17	1.99	3.33	57.44	1.59
	06/16/17	0.93	4.25	56.52	-0.92
	09/05/17	0.49	6.17	54.60	-1.92
	12/20/17	11.2	4.45	56.32	1.72
	05/17/18	5.90	5.50	55.27	-1.05
	08/23/18	3.37	6.54	54.23	-1.04
	11/15/18	7.77	5.40	55.37	1.14
	02/19/19	--	3.88	56.89	1.52
	05/21/19	--	5.19	55.58	-1.31
	08/21/19	--	5.64	55.13	-0.45
	11/12/19	0.43	4.92	55.85	0.72
	03/04/20	--	4.25	56.52	0.67
	09/03/20	--	5.50	55.27	-1.25
	03/19/21	--	4.58	56.19	0.92
	08/23/21	--	NC	--	--
	11/17/21	--	NC	--	--
	03/21/22	--	NC	--	--
MW-2					
100.56	12/23/98	--	6.89	93.67	--
	01/05/99	--	5.09	95.47	1.80
	01/20/99	--	4.48	96.08	0.61
	02/02/99	--	5.09	95.47	-0.61
60.85	08/12/11	--	5.51	55.34	--
	11/11/11	--	5.13	55.72	0.38
	02/10/12	--	4.94	55.91	0.19
	05/17/12	--	5.42	55.43	-0.48
	08/28/12	--	6.40	54.45	-0.98
	11/15/12	--	5.12	55.73	1.28
	02/14/13	--	5.32	55.53	-0.20
	05/16/13	--	5.48	55.37	-0.16
	08/14/13	0.58	6.33	54.52	-0.85
	11/25/13	0.27	5.14	55.71	1.19
	02/20/14	3.08	2.23	58.62	2.91

Table 1
Groundwater Elevation Summary

Well Number/ TOC Elevation	Date of Measurement	Dissolved Oxygen (mg/L)	DTW (feet)	SWL (feet)	Change in SWL (feet)
MW-2 Continued	05/15/14	0.12	4.86	55.99	-2.63
	08/14/14	0.36	4.93	55.92	-0.07
	11/24/14	0.14	3.70	57.15	1.23
	03/31/15	2.12	5.02	55.83	-1.32
	06/29/15	0.28	6.36	54.49	-1.34
	09/28/15	0.84	6.50	54.35	-0.14
	03/03/16	1.34	2.64	58.21	3.86
	06/21/16	0.74	5.95	54.90	-3.31
	09/16/16	0.15	6.13	54.72	-0.18
	12/20/16	0.87	4.71	56.14	1.42
	03/24/17	--	3.09	57.76	1.62
	06/16/17	0.51	4.75	56.10	-1.66
	09/05/17	0.55	6.32	54.53	-1.57
	12/20/17	4.41	4.21	56.64	2.11
	05/17/18	0.56	5.60	55.25	-1.39
	08/23/18	--	6.68	54.17	-1.08
	11/15/18	--	5.44	55.41	1.24
	02/19/19	--	4.12	56.73	1.32
	05/21/19	--	5.30	55.55	-1.18
	08/21/19	--	5.81	55.04	-0.51
	11/12/19	--	4.89	55.96	0.92
	03/04/20	--	4.67	56.18	0.22
	09/03/20	--	5.68	55.17	-1.01
	03/19/21	--	4.62	56.23	1.06
	08/23/21	--	6.09	54.76	-1.47
	11/17/21	--	3.10	57.75	2.99
	03/21/22	--	3.90	56.95	-0.80
MW-3					
100.56	12/23/98	--	5.44	95.12	--
	01/05/99	--	5.11	95.45	0.33
	01/20/99	--	4.57	95.99	0.54
	02/02/99	--	5.11	95.45	-0.54
60.80	08/12/11	--	5.54	55.26	--
	11/11/11	--	8.90	51.90	-3.36
	02/10/12	--	5.05	55.75	3.85
	05/17/12	--	5.60	55.20	-0.55
	08/28/12	--	6.40	54.40	-0.80
	11/15/12	--	5.25	55.55	1.15
	02/14/13	--	5.38	55.42	-0.13
	05/16/13	--	5.56	55.24	-0.18
	08/14/18	0.37	6.31	54.49	-0.75
	11/25/13	0.41	5.22	55.58	1.09
	02/20/14	0.26	4.34	56.46	0.88
	05/15/14	0.77	5.03	55.77	-0.69
	08/14/14	0.29	6.28	54.52	-1.25
	11/24/14	0.05	5.21	55.59	1.07
	03/31/15	1.24	5.15	55.65	0.06
	06/29/15	0.25	6.37	54.43	-1.22
	09/28/15	0.25	6.51	54.29	-0.14
	03/03/16	1.48	4.55	56.25	1.96
	06/21/16	0.90	5.93	54.87	-1.38
	09/16/16	0.11	6.09	54.71	-0.16
	12/20/16	1.94	5.38	55.42	0.71
	03/24/17	--	4.57	56.23	0.81
	06/16/17	0.29	5.23	55.57	-0.66
	09/05/17	0.21	6.30	54.50	-1.07
	12/20/17	0.78	4.91	55.89	1.39
	05/17/18	0.71	5.63	55.17	-0.72
	08/23/18	--	6.63	54.17	-1.00

Table 1
Groundwater Elevation Summary

Well Number/ TOC Elevation	Date of Measurement	Dissolved Oxygen (mg/L)	DTW (feet)	SWL (feet)	Change in SWL (feet)
MW-3 Continued	11/15/18	1.91	5.48	55.32	1.15
	02/19/19	0.34	4.77	56.03	0.71
	05/21/19	0.36	5.31	55.49	-0.54
	08/21/19	0.21	5.75	55.05	-0.44
	11/12/19	--	5.07	55.73	0.68
	03/04/20	--	4.72	56.08	0.35
	09/03/20	--	5.62	55.18	-0.90
	03/19/21	--	4.58	56.22	1.04
	08/23/21	--	6.05	54.75	-1.47
	11/17/21	--	3.28	57.52	2.77
	03/21/22	--	4.29	56.51	-1.01
MW-4					
100.61	02/02/99	--	5.11	95.50	--
60.93	08/12/11	--	6.37	54.56	--
	11/11/11	--	5.65	55.28	0.72
	02/10/12	--	5.20	55.73	0.45
	05/17/12	--	5.63	55.30	-0.43
	08/28/12	--	6.50	54.43	-0.87
	11/15/12	--	5.36	55.57	1.14
	02/14/13	--	5.50	55.43	-0.14
	05/16/13	--	5.67	55.26	-0.17
	08/14/13	0.18	6.42	54.51	-0.75
	11/25/13	--	5.31	55.62	1.11
	02/20/14	0.37	4.45	56.48	0.86
	05/15/14	0.45	5.14	55.79	-0.69
	08/14/14	0.27	6.33	54.60	-1.19
	11/24/14	0.04	5.27	55.66	1.06
	03/31/15	0.98	5.27	55.66	0.00
	06/29/15	0.15	6.45	54.48	-1.18
	09/28/15	0.27	6.62	54.31	-0.17
	03/03/16	4.79	3.20	57.73	3.42
	06/21/16	0.49	6.11	54.82	-2.91
	09/16/16	0.64	6.40	54.53	-0.29
	12/20/16	0.75	6.32	54.61	0.08
	03/24/17	0.23	4.69	56.24	1.63
	06/16/17	0.24	5.36	55.57	-0.67
	09/05/17	0.58	6.39	54.54	-1.03
	12/20/17	0.75	5.00	55.93	1.39
	01/02/18	1.52	5.00	55.93	0.00
	05/17/18	0.57	5.74	55.19	-0.74
	08/23/18	--	6.73	54.20	-0.99
	11/15/18	--	5.55	55.38	1.18
	02/19/19	--	4.90	56.03	0.65
	05/21/19	--	5.41	55.52	-0.51
	08/21/19	--	5.83	55.10	-0.42
	11/12/19	--	5.22	55.71	0.61
	03/04/20	--	4.81	56.12	0.41
	09/03/20	--	5.70	55.23	-0.89
	03/19/21	--	4.75	56.18	0.95
	08/23/21	--	6.11	54.82	-1.36
	11/17/21	--	4.21	56.72	1.90
	03/21/22	--	4.39	56.54	-0.18
MW-5					
60.90	08/14/13	0.21	6.31	54.59	--
	11/25/13	--	5.24	55.66	1.07
	02/20/14	--	4.38	56.52	0.86
	05/15/14	0.29	5.06	55.84	-0.68
	08/14/14	--	6.31	54.59	-1.25
	11/24/14	0.08	5.24	55.66	1.07

Table 1
Groundwater Elevation Summary

Well Number/ TOC Elevation	Date of Measurement	Dissolved Oxygen (mg/L)	DTW (feet)	SWL (feet)	Change in SWL (feet)
MW-5 Continued	03/31/15	1.09	5.17	55.73	0.07
	06/29/15	0.28	6.35	54.55	-1.18
	09/28/15	0.52	6.51	54.39	-0.16
	03/03/16	2.03	4.59	56.31	1.92
	06/21/16	0.40	5.96	54.94	-1.37
	09/16/16	0.10	6.11	54.79	-0.15
	12/20/16	1.09	5.16	55.74	0.95
	03/24/17	--	4.61	56.29	0.55
	06/16/17	0.30	5.27	55.63	-0.66
	09/05/17	0.51	6.27	54.63	-1.00
	12/20/17	0.93	4.92	55.98	1.35
	01/02/18	1.20	4.92	55.98	0.00
	05/17/18	0.95	5.65	55.25	-0.73
	08/23/18	--	6.58	54.32	-0.93
	11/15/18	--	5.44	55.46	1.14
	02/19/19	--	4.80	56.10	0.64
	05/21/19	--	5.31	55.59	-0.51
	08/21/19	--	5.73	55.17	-0.42
	11/12/19	--	5.06	55.84	0.67
	03/04/20	--	4.72	56.18	0.34
	09/03/20	--	5.61	55.29	-0.89
	03/19/21	--	4.69	56.21	0.92
	08/23/21	--	5.98	54.92	-1.29
	11/17/21	--	4.05	56.85	1.93
	03/21/22	--	4.24	56.66	-0.19
MW-6 60.76	08/14/13	0.22	6.21	54.55	--
	11/25/13	--	5.13	55.63	1.08
	02/20/14	0.29	4.27	56.49	0.86
	05/15/14	0.33	4.97	55.79	-0.70
	08/14/14	0.20	6.13	54.63	-1.16
	11/24/14	0.09	5.08	55.68	1.05
	03/31/15	0.09	5.10	55.66	-0.02
	06/29/15	0.17	6.27	54.49	-1.17
	09/28/15	0.37	6.42	54.34	-0.15
	03/03/16	0.67	4.53	56.23	1.89
	06/21/16	0.52	5.91	54.85	-1.38
	09/16/16	0.33	6.01	54.75	-0.10
	12/20/16	1.30	5.14	55.62	0.87
	03/24/17	0.18	4.52	56.24	0.62
	06/16/17	0.23	5.18	55.58	-0.66
	09/05/17	0.61	6.23	54.53	-1.05
	12/20/17	0.76	4.80	55.96	1.43
	01/02/18	0.86	4.80	55.96	0.00
	05/17/18	0.35	5.57	55.19	-0.77
	08/23/18	0.48	6.51	54.25	-0.94
	11/15/18	1.22	5.39	55.37	1.12
	02/19/19	0.39	4.69	56.07	0.70
	05/21/19	0.32	5.22	55.54	-0.53
	08/21/19	--	5.63	55.13	-0.41
	11/12/19	--	5.14	55.62	0.49
	03/04/20	--	4.62	56.14	0.52
	09/03/20	--	5.50	55.26	-0.88
	03/19/21	--	4.59	56.17	0.91
	08/23/21	--	5.90	54.86	-1.31
	11/17/21	--	4.02	56.74	1.88
	03/21/22	--	4.19	56.57	-0.17

Table 1
Groundwater Elevation Summary

Well Number/ TOC Elevation	Date of Measurement	Dissolved Oxygen (mg/L)	DTW (feet)	SWL (feet)	Change in SWL (feet)
MW-7					
59.87	09/16/16	0.57	5.15	54.72	--
	12/20/16	0.72	5.27	54.60	-0.12
	03/24/17	0.23	3.68	56.19	1.59
	06/16/17	0.31	4.33	55.54	-0.65
	09/05/17	0.21	5.43	54.44	-1.10
	12/20/17	0.94	3.95	55.92	1.48
	05/17/18	0.53	4.71	55.16	-0.76
	08/23/18	--	5.67	54.20	-0.96
	11/15/18	--	4.49	55.38	1.18
	02/19/19	--	3.85	56.02	0.64
	05/21/19	--	4.36	55.51	-0.51
	08/21/19	--	4.76	55.11	-0.40
	11/12/19	--	4.14	55.73	0.62
	03/04/20	--	3.77	56.10	0.37
	09/03/20	--	4.62	55.25	-0.85
	03/19/21	--	3.72	56.15	0.90
	08/23/21	--	5.19	54.68	-1.47
	11/17/21	--	3.10	56.77	2.09
	03/21/22	--	NC	--	--
MW-8					
59.70	09/16/16	0.52	5.09	54.61	--
	12/20/16	1.29	4.62	55.08	0.47
	03/24/17	0.33	3.67	56.03	0.95
	06/16/17	0.28	4.21	55.49	-0.54
	09/05/17	0.34	5.31	54.39	-1.10
	12/20/17	1.39	3.78	55.92	1.53
	05/17/18	0.62	4.66	55.04	-0.88
	06/05/18	0.67	5.90	53.80	-1.24
	08/23/18	0.93	5.56	54.14	0.34
	11/15/18	2.03	4.44	55.26	1.12
	02/19/19	0.41	3.73	55.97	0.71
	05/21/19	0.39	4.20	55.50	-0.47
	08/21/19	--	4.62	55.08	-0.42
	11/12/19	--	3.89	55.81	0.73
	03/04/20	--	3.61	56.09	0.28
	09/03/20	--	4.49	55.21	-0.88
	03/19/21	--	3.55	56.15	0.94
	08/23/21	--	4.92	54.78	-1.37
	11/17/21	--	2.97	56.73	1.95
	03/21/22	--	3.19	56.51	-0.22
MW-9					
60.91	09/05/17	0.38	6.33	54.58	--
	12/20/17	4.73	4.73	56.18	1.60
	05/17/18	0.67	5.64	55.27	-0.91
	08/23/18	1.03	6.69	54.22	-1.05
	11/15/18	0.84	5.50	55.41	1.19
	02/19/19	0.48	4.70	56.21	0.80
	05/21/19	0.29	5.33	55.58	-0.63
	08/21/19	0.29	5.80	55.11	-0.47
	11/12/19	0.50	5.09	55.82	0.71
	03/04/20	0.35	4.72	56.19	0.37
	09/03/20	0.42	5.67	55.24	-0.95
	03/19/21	4.97	4.54	56.37	1.13
	08/23/21	1.73	6.09	54.82	-1.55
	11/17/21	6.09	4.03	56.88	2.06
	03/21/22	4.12	4.07	56.84	-0.04

Table 1
Groundwater Elevation Summary

Well Number/ TOC Elevation	Date of Measurement	Dissolved Oxygen (mg/L)	DTW (feet)	SWL (feet)	Change in SWL (feet)
MW-10					
59.80	02/19/19	0.69	4.09	55.71	--
	05/21/19	0.30	4.36	55.44	-0.27
	08/21/19	0.47	4.75	55.05	-0.39
	11/12/19	0.40	4.46	55.34	0.29
	03/04/20	--	3.89	55.91	0.57
	09/03/20	--	4.62	55.18	-0.73
	03/19/21	--	3.64	56.16	0.98
	08/23/21	--	5.05	54.75	-1.41
	11/17/21	--	3.04	56.76	2.01
	03/21/22	--	3.32	56.48	-0.28

Notes:

TOC - Top of casing
SWL - Static water level
mg/L - Milligrams per liter
NC - Not collected
DTW - Depth to water
-- - Not applicable/Not measured
Wells MW-1 thru MW-4 surveyed to an arbitary datum of 100 feet in 1998.
Wells MW-1 through MW-9 surveyed to the North American Vertical Datum of 1988 (NAVD 88) on September 19, 2017 and MW-10 on February 5, 2019.

Table 2
Summary of Groundwater Analytical Results

			Ecology Method NWTPH-Gx (µg/L)	Ecology Method NWTPH-Dx (µg/L)			Volatile Organic Compounds USEPA Method 8021B/8260B (µg/L)			
Well ID	**Sample ID**	**Collection Date**	**TPH-g**	**TPH-d**	**TPH-o**	**Total TPH (C_{12} - C_{36})**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**
MW-1	MW-1	12/23/1998	--	<250	<500	<500	--	--	--	--
	NA	8/12/2011	<100	<250	<500	<500	<1	<1	<1	<3
	NA	11/11/2011	<100	**1,500**	300	**1,800**	<1	<1	<1	<3
	NA	2/10/2012	<100	**690**	<250	**690**	<1	<1	<1	<3
	NA	5/17/2012	<100	**1,100**	480	**1,580**	<1	<1	<1	<3
	NA	8/28/2012	<100	**1,200**	**820**	**2,020**	<1	<1	<1	<3
	NA	11/15/2012	<100	**2,700**	**1,200**	**3,900**	<1	<1	<1	<3
	NA	2/14/2013	<100	**1,600**	**510**	**2,110**	<1	<1	<1	<3
	NA	5/16/2013	<100	**1,500**	340	**1,840**	<1	<1	<1	<3
	NA	8/14/2013	<100	**1,100**	290	**1,390**	<1	<1	<1	<3
	NA	11/25/2013	--	**1,400**	400	**1,800**	--	--	--	--
	NA	2/20/2014	--	**700**	280	**980**	--	--	--	--
	NA	5/15/2014	--	**940**	<250	**940**	--	--	--	--
	NA	8/14/2014	--	<50	<250	<250	--	--	--	--
	NA	11/24/2014	--	220	<250	220	--	--	--	--
	NA	3/31/2015	--	340	<250	340	--	--	--	--
	NA	6/29/2015	--	240	<250	240	--	--	--	--
	NA	9/28/2015	--	**700**	290	**990**	--	--	--	--
	NA	3/3/2016	--	220	<250	220	--	--	--	--
	NA	6/21/2016	--	160	<250	160	--	--	--	--
	NA	9/16/2016	--	**580**	420	**1,000**	--	--	--	--
	NA	12/20/2016	--	190	<250	190	--	--	--	--
	NA	3/24/2017	--	53	<250	53	--	--	--	--
	NA	6/19/2017	--	310	**560**	**870**	--	--	--	--
	NA	9/5/2017	--	340	340	**680**	--	--	--	--
	NA	12/20/2017	--	150	340	490	--	--	--	--
	EW-051718-1	5/17/2018	--	<400	<400	<400	--	--	--	--
	EW-082318-3	8/23/2018	--	<380	<380	<380	--	--	--	--
	EW-111518-6	11/15/2018	--	<400	<400	<400	--	--	--	--
	NS	2/19/2019	--	--	--	--	--	--	--	--
	NS	5/21/2019	--	--	--	--	--	--	--	--
	NS	8/21/2019	--	--	--	--	--	--	--	--
	EW-111219-3	11/12/2019	--	220 J	160 J	380 J	--	--	--	--
	NS	3/4/2020	--	--	--	--	--	--	--	--
	NS	9/3/2020	--	--	--	--	--	--	--	--
	NS	3/19/2021	--	--	--	--	--	--	--	--
	NS	8/23/2021	--	--	--	--	--	--	--	--
	NS	11/17/2021	--	--	--	--	--	--	--	--
	NS	3/21/2022	--	--	--	--	--	--	--	--
MW-2	MW-2	12/23/1998	--	250	<500	<500	--	--	--	--
	MW-2	1/29/1999	230	--	--	--	8.3	1.2	<1.0	4.0
	NA	8/12/2011	<100	<250	<500	<500	<1	<1	<1	<3
	NA	11/11/2011	<100	500	<250	500	<1	<1	<1	<3
	NA	2/10/2012	<100	<50	<250	<250	<1	<1	<1	<3
	NA	5/17/2012	<100	<50	<250	<250	<1	<1	<1	<3
	NA	8/28/2012	<100	470	**730**	**1,200**	<1	<1	<1	<3
	NA	11/15/2012	<100	140	<260	140	<1	<1	<1	<3
	NA	2/14/2013	<100	94	260	354	<1	<1	<1	<3
	NA	5/16/2013	<100	77	<250	77	<1	<1	<1	<3
	NA	8/14/2013	<100	280	<250	280	<1	<1	<1	<3
	NA	11/25/2013	--	53	<250	53	--	--	--	--
	NA	2/20/2014	--	<50	<250	<250	--	--	--	--
	NA	5/15/2014	--	<50	<250	<250	--	--	--	--

Table 2
Summary of Groundwater Analytical Results

			Ecology Method NWTPH-Gx (µg/L)	Ecology Method NWTPH-Dx (µg/L)			Volatile Organic Compounds USEPA Method 8021B/8260B (µg/L)			
Well ID	**Sample ID**	**Collection Date**	**TPH-g**	**TPH-d**	**TPH-o**	**Total TPH (C_{12} - C_{36})**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**
MW-2	NA	8/14/2014	--	100	<250	100	--	--	--	--
Continued	NA	11/24/2014	--	<50	<250	<250	--	--	--	--
	NA	3/31/2015	--	57	<250	57	--	--	--	--
	NA	6/29/2015	--	97	<250	97	--	--	--	--
	NA	9/28/2015	--	150	<250	150	--	--	--	--
	NA	3/3/2016	--	<50	<250	<250	--	--	--	--
	NA	6/21/2016	--	86	<250	86	--	--	--	--
	NA	9/16/2016	--	95	<250	95	--	--	--	--
	NA	12/20/2016	--	<50	<250	<250	--	--	--	--
	NA	6/19/2017	--	61	<250	61	--	--	--	--
	NA	9/5/2017	--	100	<250	100	--	--	--	--
	NA	12/20/2017	--	<50	<250	<250	--	--	--	--
	EW-051718-4	5/17/2018	--	<410	<410	<410	--	--	--	--
	NS	8/23/2018	--	--	--	--	--	--	--	--
	NS	11/15/2018	--	--	--	--	--	--	--	--
	NS	2/19/2019	--	--	--	--	--	--	--	--
	NS	5/21/2019	--	--	--	--	--	--	--	--
	NS	8/21/2019	--	--	--	--	--	--	--	--
	NS	11/12/2019	--	--	--	--	--	--	--	--
	NS	3/4/2020	--	--	--	--	--	--	--	--
	NS	9/3/2020	--	--	--	--	--	--	--	--
	NS	3/19/2021	--	--	--	--	--	--	--	--
	NS	8/23/2021	--	--	--	--	--	--	--	--
	NS	11/17/2021	--	--	--	--	--	--	--	--
	NS	3/21/2022	--	--	--	--	--	--	--	--
MW-3	MW-3	12/23/1998	--	<250	<500	<500	--	--	--	--
	NA	8/12/2011	<100	<250	<500	<500	<1	<1	<1	<3
	NA	11/11/2011	<100	65	<250	65	<1	<1	<1	<3
	NA	2/10/2012	<100	100	<250	100	<1	<1	<1	<3
	NA	5/17/2012	<100	53	<250	53	<1	<1	<1	<3
	NA	8/28/2012	<100	130	<250	130	<1	<1	<1	<3
	NA	11/15/2012	<100	120	<280	120	<1	<1	<1	<3
	NA	2/14/2013	<100	150	<250	150	<1	<1	<1	<3
	NA	5/16/2013	<100	200	<250	200	<1	<1	<1	<3
	NA	8/14/2013	<100	140	<250	140	<1	<1	<1	<3
	NA	11/25/2013	--	170	<250	170	--	--	--	--
	NA	2/20/2014	--	160	<250	160	--	--	--	--
	NA	5/15/2014	--	120	<250	120	--	--	--	--
	NA	8/14/2014	--	140	<250	140	--	--	--	--
	NA	11/24/2014	--	130	<250	130	--	--	--	--
	NA	3/31/2015	--	220	<250	220	--	--	--	--
	NA	6/29/2015	--	130	<250	130	--	--	--	--
	NA	9/28/2015	--	110	<250	110	--	--	--	--
	NA	3/3/2016	--	92	<250	92	--	--	--	--
	NA	6/21/2016	--	85	<250	85	--	--	--	--
	NA	9/16/2016	--	100	<250	100	--	--	--	--
	NA	12/20/2016	--	99	<250	99	--	--	--	--
	NA	6/19/2017	--	310	<250	310	--	--	--	--
	NA	9/5/2017	--	210	<250	210	--	--	--	--
	NA	12/20/2017	--	150	<250	150	--	--	--	--
	EW-051718-9	5/17/2018	--	**520**	<400	**520**	--	--	--	--
	NS	8/23/2018	--	--	--	--	--	--	--	--

Table 2
Summary of Groundwater Analytical Results

			Ecology Method NWTPH-Gx (µg/L)	Ecology Method NWTPH-Dx (µg/L)			Volatile Organic Compounds USEPA Method 8021B/8260B (µg/L)			
Well ID	**Sample ID**	**Collection Date**	**TPH-g**	**TPH-d**	**TPH-o**	**Total TPH (C_{12} - C_{36})**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**
MW-3	EW-111518-1	11/15/2018	--	<390	<390	<390	--	--	--	--
Continued	EW-021919-4	2/19/2019	--	<400	<400	<400	--	--	--	--
duplicate	EW-021919-5	2/19/2019	--	<400	<400	<400	--	--	--	--
	EW-052119-3	5/21/2019	--	<410	<410	<410	--	--	--	--
duplicate	EW-052119-4	5/21/2019	--	<400	<400	<400	--	--	--	--
	EW-082119-3	8/21/2019	--	<410	<410	<410	--	--	--	--
duplicate	EW-082119-4	8/21/2019	--	<390	<390	<390	--	--	--	--
	NS	11/12/2019	--	--	--	--	--	--	--	--
	NS	3/4/2020	--	--	--	--	--	--	--	--
	NS	9/3/2020	--	--	--	--	--	--	--	--
	NS	3/19/2021	--	--	--	--	--	--	--	--
	NS	8/23/2021	--	--	--	--	--	--	--	--
	NS	11/17/2021	--	--	--	--	--	--	--	--
	NS	3/21/2022	--	--	--	--	--	--	--	--
MW-4	MW-4	1/29/1999	<100	--	--	--	<1.0	<1.0	<1.0	<1.0
	NA	8/12/2011	<100	<250	<500	<500	<1	<1	<1	<3
	NA	11/11/2011	<100	72	<250	72	<1	<1	<1	<3
	NA	2/10/2012	<100	150	<250	150	<1	<1	<1	<3
	NA	5/17/2012	<100	160	<250	160	<1	<1	<1	<3
	NA	8/28/2012	<100	200	<250	200	<1	<1	<1	<3
	NA	11/15/2012	<100	220	<250	220	<1	<1	<1	<3
	NA	2/14/2013	<100	220	<250	220	<1	<1	<1	<3
	NA	5/16/2013	<100	210	<250	210	<1	<1	<1	<3
	NA	8/14/2013	<100	200	<250	200	<1	<1	<1	<3
	NA	2/20/2014	--	140	<250	140	--	--	--	--
	NA	5/15/2014	--	140	<250	140	--	--	--	--
	NA	8/14/2014	--	290	<250	290	--	--	--	--
	NA	11/24/2014	--	290	<250	290	--	--	--	--
	NA	3/31/2015	--	320	<250	320	--	--	--	--
	NA	6/29/2015	--	240	<250	240	--	--	--	--
	NA	9/28/2015	--	220	<250	220	--	--	--	--
	NA	3/3/2016	--	130	<250	130	--	--	--	--
	NA	6/21/2016	--	63	<250	63	--	--	--	--
	NA	9/29/2016	--	68	<250	68	--	--	--	--
	NA	12/20/2016	--	78	<250	78	--	--	--	--
	NA	3/24/2017	--	<50	<250	<250	--	--	--	--
	NA	6/19/2017	--	110	<250	110	--	--	--	--
	NA	9/5/2017	--	150	<250	150	--	--	--	--
	NA	1/2/2018	--	<50	<250	<250	--	--	--	--
	EW-051718-8	5/17/2018	--	<400	<400	<400	--	--	--	--
	NS	8/23/2018	--	--	--	--	--	--	--	--
	NS	11/15/2018	--	--	--	--	--	--	--	--
	NS	2/19/2019	--	--	--	--	--	--	--	--
	NS	5/21/2019	--	--	--	--	--	--	--	--
	NS	8/21/2019	--	--	--	--	--	--	--	--
	NS	11/12/2019	--	--	--	--	--	--	--	--
	NS	3/4/2020	--	--	--	--	--	--	--	--
	NS	9/3/2020	--	--	--	--	--	--	--	--
	NS	3/19/2021	--	--	--	--	--	--	--	--
	NS	8/23/2021	--	--	--	--	--	--	--	--
	NS	11/17/2021	--	--	--	--	--	--	--	--
	NS	3/21/2022	--	--	--	--	--	--	--	--

Table 2
Summary of Groundwater Analytical Results

			Ecology Method NWTPH-Gx (µg/L)	Ecology Method NWTPH-Dx (µg/L)			Volatile Organic Compounds USEPA Method 8021B/8260B (µg/L)			
Well ID	**Sample ID**	**Collection Date**	**TPH-g**	**TPH-d**	**TPH-o**	**Total TPH (C_{12} - C_{36})**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**
MW-5	NA	6/5/2013	<100	160	<250	160	<1	<1	<1	<3
	NA	8/14/2013	<100	56	<250	56	<1	<1	<1	<3
	NA	11/24/2014	<100	<50	<250	<250	--	--	--	--
	NA	3/31/2015	--	52	<250	52	--	--	--	--
	NA	6/29/2015	--	<50	<250	<250	--	--	--	--
	NA	9/28/2015	--	<50	<250	<250	--	--	--	--
	NA	3/3/2016	--	<50	<250	<250	--	--	--	--
	NA	6/21/2016	--	<50	<250	<250	--	--	--	--
	NA	9/16/2016	--	<50	<250	<250	--	--	--	--
	NA	12/20/2016	--	<50	<250	<250	--	--	--	--
	NA	6/19/2017	--	55	<250	55	--	--	--	--
	NA	9/5/2017	--	68	<250	68	--	--	--	--
	NA	1/2/2018	--	<50	<250	<250	--	--	--	--
	EW-051718-5	5/17/2018	--	<380	<380	<380	--	--	--	--
	NS	8/23/2018	--	--	--	--	--	--	--	--
	NS	11/15/2018	--	--	--	--	--	--	--	--
	NS	2/19/2019	--	--	--	--	--	--	--	--
	NS	5/21/2019	--	--	--	--	--	--	--	--
	NS	8/21/2019	--	--	--	--	--	--	--	--
	NS	11/12/2019	--	--	--	--	--	--	--	--
	NS	3/4/2020	--	--	--	--	--	--	--	--
	NS	9/3/2020	--	--	--	--	--	--	--	--
	NS	3/19/2021	--	--	--	--	--	--	--	--
	NS	8/23/2021	--	--	--	--	--	--	--	--
	NS	11/17/2021	--	--	--	--	--	--	--	--
	NS	3/21/2022	--	--	--	--	--	--	--	--
MW-6	NA	6/5/2013	<100	**680**	<250	**680**	<1	<1	<1	<3
	NA	8/14/2013	<100	**790**	<250	**790**	<1	<1	<1	<3
	NA	2/20/2014	--	**740**	<250	**740**	--	--	--	--
	NA	5/15/2014	--	**950**	<250	**950**	--	--	--	--
	NA	8/14/2014	--	**1,200**	<250	**1,200**	--	--	--	--
	NA	11/24/2014	--	**680**	<250	**680**	--	--	--	--
	NA	3/31/2015	--	**750**	<250	**750**	--	--	--	--
	NA	6/29/2015	--	**750**	<250	**750**	--	--	--	--
	NA	9/28/2015	--	**610**	<250	**610**	--	--	--	--
	NA	3/3/2016	--	**1,100**	390	**1,490**	--	--	--	--
	NA	6/21/2016	--	**650**	<250	**650**	--	--	--	--
	NA	9/16/2016	--	340	<250	340	--	--	--	--
	NA	12/20/2016	--	**640**	<250	**640**	--	--	--	--
	NA	3/24/2017	--	**580**	<250	**580**	--	--	--	--
	NA	6/19/2017	--	**970**	280	**1,250**	--	--	--	--
	NA	9/5/2017	--	320	<250	320	--	--	--	--
	NA	1/2/2018	--	240	<250	240	--	--	--	--
	EW-051718-6	5/17/2018	--	**880**	<400	**880**	--	--	--	--
	EW-082318-4	8/23/2018	--	<400	<400	<400	--	--	--	--
	EW-082318-3	11/15/2018	--	<380	<380	<380	--	--	--	--
	EW-021919-2	2/19/2019	--	470	<400	470	--	--	--	--
	EW-052119-2	5/21/2019	--	<390	<390	<390	--	--	--	--
	NS	8/21/2019	--	--	--	--	--	--	--	--
	NS	11/12/2019	--	--	--	--	--	--	--	--
	NS	3/4/2020	--	--	--	--	--	--	--	--
	NS	9/3/2020	--	--	--	--	--	--	--	--
	NS	3/19/2021	--	--	--	--	--	--	--	--

Table 2
Summary of Groundwater Analytical Results

			Ecology Method NWTPH-Gx (µg/L)	Ecology Method NWTPH-Dx (µg/L)			Volatile Organic Compounds USEPA Method 8021B/8260B (µg/L)			
Well ID	**Sample ID**	**Collection Date**	**TPH-g**	**TPH-d**	**TPH-o**	**Total TPH (C_{12} - C_{36})**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**
MW-6	NS	8/23/2021	--	--	--	--	--	--	--	--
Continued	NS	11/17/2021	--	--	--	--	--	--	--	--
	NS	3/21/2022	--	--	--	--	--	--	--	--
MW-7	NA	9/16/2016	--	140	<250	140	--	--	--	--
	NA	12/20/2016	--	78	<250	78	--	--	--	--
	NA	3/24/2017	--	<50	<250	<250	--	--	--	--
	NA	6/19/2017	--	100	<250	100	--	--	--	--
	NA	9/5/2017	--	59	<250	59	--	--	--	--
	NA	12/20/2017	--	99	<250	99	--	--	--	--
	EW-051718-7	5/17/2018	--	<380	<380	<380	--	--	--	--
	NS	8/23/2018	--	--	--	--	--	--	--	--
	NS	11/15/2018	--	--	--	--	--	--	--	--
	NS	2/19/2019	--	--	--	--	--	--	--	--
	NS	5/21/2019	--	--	--	--	--	--	--	--
	NS	8/21/2019	--	--	--	--	--	--	--	--
	NS	11/12/2019	--	--	--	--	--	--	--	--
	NS	3/4/2020	--	--	--	--	--	--	--	--
	NS	9/3/2020	--	--	--	--	--	--	--	--
	NS	3/19/2021	--	--	--	--	--	--	--	--
	NS	8/23/2021	--	--	--	--	--	--	--	--
	NS	11/17/2021	--	--	--	--	--	--	--	--
	NS	3/21/2022	--	--	--	--	--	--	--	--
MW-8	NA	10/3/2016	--	290	<250	290	--	--	--	--
	NA	12/20/2016	--	140	<250	140	--	--	--	--
	NA	3/24/2017	--	<50	<250	<250	--	--	--	--
	NA	6/26/2017	--	180	<250	180	--	--	--	--
	NA	9/5/2017	--	160	<250	160	--	--	--	--
	NA	12/20/2017	--	140	<250	140	--	--	--	--
	EW-051718-10	5/17/2018	--	**1,900**	**2,800**	**4,700**	--	--	--	--
	EW-060518-1	6/5/2018	--	**850**	**770**	**1,620**	--	--	--	--
	EW-082318-5	8/23/2018	<100	450	<380	450	<1.0	<1.0	<1.0	<3.0
	EW-111518-2	11/15/2018	--	<400	<400	<400	--	--	--	--
	EW-021919-3	2/19/2019	--	<400	<400	<400	--	--	--	--
	EW-052119-5	5/21/2019	--	<400	<400	<400	--	--	--	--
	NS	8/21/2019	--	--	--	--	--	--	--	--
	NS	11/12/2019	--	--	--	--	--	--	--	--
	NS	3/4/2020	--	--	--	--	--	--	--	--
	NS	9/3/2020	--	--	--	--	--	--	--	--
	NS	3/19/2021	--	--	--	--	--	--	--	--
	NS	8/23/2021	--	--	--	--	--	--	--	--
	NS	11/17/2021	--	--	--	--	--	--	--	--
	NS	3/21/2022	--	--	--	--	--	--	--	--
MW-9	NA	9/5/2017	--	**4,300**	<250	**4,300**	--	--	--	--
	NA	12/20/2017	--	360	<250	360	--	--	--	--
	EW-051718-2	5/17/2018	--	450	<400	450	--	--	--	--
duplicate	EW-051718-3	5/17/2018	--	470	<390	470	--	--	--	--
	EW-082318-1	8/23/2018	--	**790**	<400	**790**	--	--	--	--
duplicate	EW-082318-2	8/23/2018	--	**700**	<400	**700**	--	--	--	--
	EW-111518-4	11/15/2018	--	<390	<390	<390	--	--	--	--
duplicate	EW-111518-5	11/15/2018	--	<400	<400	<400	--	--	--	--
	EW-021919-1	2/19/2019	<100	<400	<400	<400	<1.0	<1.0	<1.0	<3.0
	EW-052119-1	5/21/2019	--	**510**	<410	**510**	--	--	--	--

Table 2
Summary of Groundwater Analytical Results

			Ecology Method NWTPH-Gx (µg/L)	Ecology Method NWTPH-Dx (µg/L)			Volatile Organic Compounds USEPA Method 8021B/8260B (µg/L)			
Well ID	**Sample ID**	**Collection Date**	**TPH-g**	**TPH-d**	**TPH-o**	**Total TPH (C_{12} - C_{36})**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**
MW-9	EW-082119-1	8/21/2019	--	**630**	<390	**630**	--	--	--	--
Continued	EW-111219-1	11/12/2019	--	**520**	91 J	**611 J**	--	--	--	--
duplicate	EW-111219-2	11/12/2019	--	380 J	92 J	472 J	--	--	--	--
	EW-030420-1	3/4/2020	--	260 J	89 J	349 J	--	--	--	--
duplicate	EW-030420-2	3/4/2020	--	290 J	93 J	383 J	--	--	--	--
	EW-090320-1	9/3/2020	--	**750**	150 J	**900 J**	--	--	--	--
duplicate	EW-090320-2	9/3/2020	--	**850**	150 J	**1,000 J**	--	--	--	--
	EW-031921-01	3/19/2021	--	140 J	<120	140 J	--	--	--	--
duplicate	EW-031921-02	3/19/2021	--	180 J	<120	180 J	--	--	--	--
	EW-082321-01	8/23/2021	--	240 J	<220	240 J	--	--	--	--
duplicate	EW-082321-02	8/23/2021	--	280 J	<190	280 J	--	--	--	--
	EW-111721-01	11/17/2021	--	<120	<190	<190	--	--	--	--
duplicate	EW-111721-02	11/17/2021	--	<150	<230	<230	--	--	--	--
	EW-032122-01	3/21/2022	--	130 J	<220	130 J	--	--	--	--
duplicate	EW-032122-02	3/21/2022	--	<140	<220	<220	--	--	--	--
MW-10	EW-021919-6	2/19/2019	<100	<400	<400	<400	<1.0	<1.0	<1.0	<3.0
	EW-052119-6	5/21/2019	--	<390	<390	<390	--	--	--	--
	EW-082119-2	8/21/2019	--	<400	<400	<400	--	--	--	--
	EW-111219-4	11/12/2019	--	200 J	100 J	300 J	--	--	--	--
	NS	3/4/2020	--	--	--	--	--	--	--	--
	NS	9/3/2020	--	--	--	--	--	--	--	--
	NS	3/19/2021	--	--	--	--	--	--	--	--
	NS	8/23/2021	--	--	--	--	--	--	--	--
	NS	11/17/2021	--	--	--	--	--	--	--	--
	NS	3/21/2022	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Levels for Groundwater[a]			**800/1,000[b]**	**500**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

Notes:

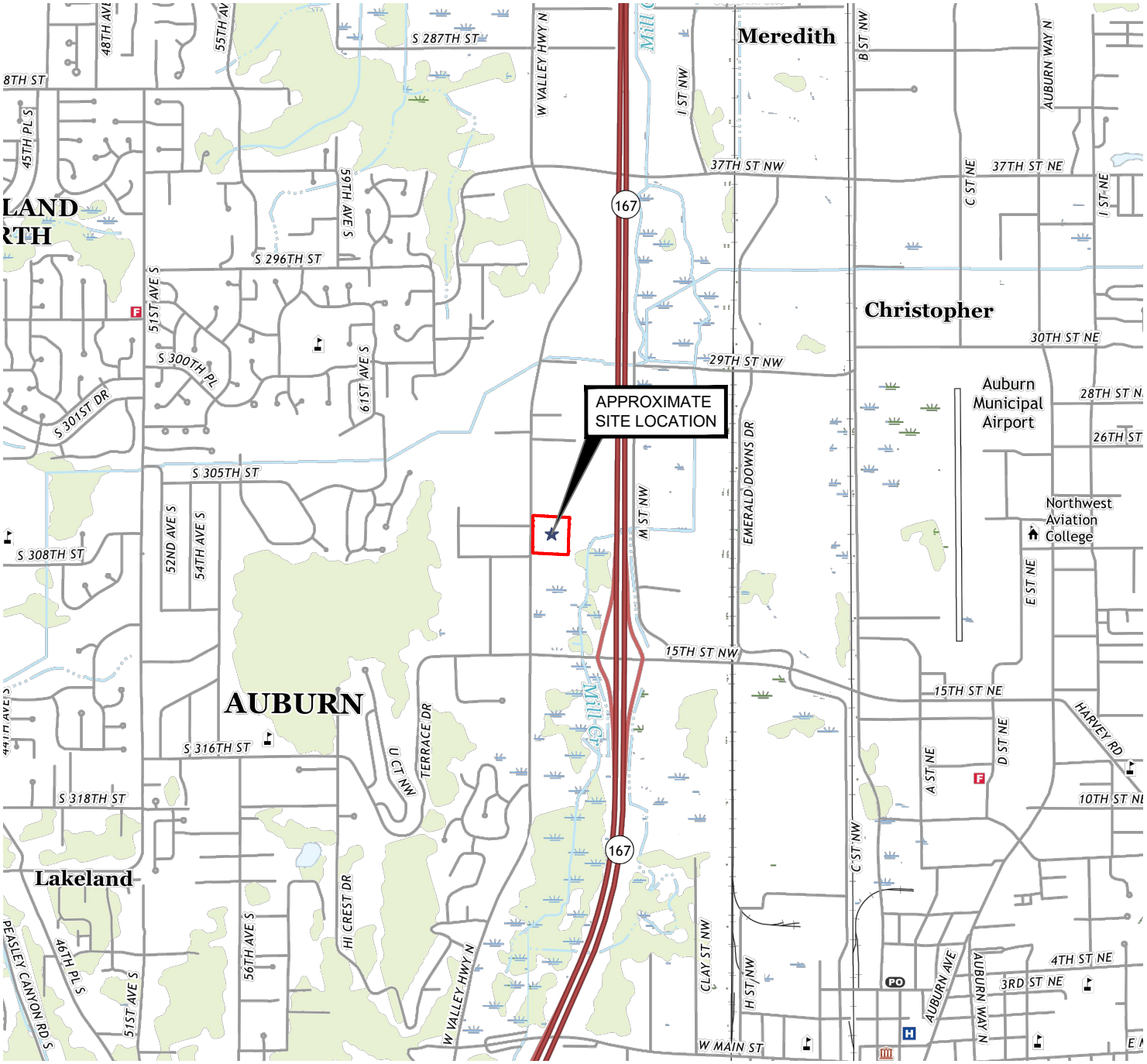
MTCA - Model Toxics Control Act
USEPA - United States Environmental Protection Agency
CCL - Contaminant Cleanup Level
Bold - Value exceeds MTCA Method A cleanup level
TPH-d - diesel range total petroleum hydrocarbons
TPH-g - gasoline range total petroleum hydrocarbons
TPH-o - total petroleum hydrocarbons in the oil range

µg/L - micrograms per liter
-- - Not Analyzed
< - Not reported at, or above the indicated laboratory MRL
NS - Not Sampled
NA - Not Applicable
Shaded value indicates compound was reported either at, or above the laboratory MRL or MDL

J - Estimated concentration above the adjusted laboratory method detection limit (MDL) and below the adjusted laboratory method reporting limit (MRL).

[a] MTCA Method A Groundwater Cleanup Levels for Unrestricted Land Uses are referenced from the February 12, 2001. *Washington Department of Ecology Model Toxics Control Act Cleanup Regulation Chapter 173-340,* Table 720-1.

[b] 800 µg/L if benzene has been detected in groundwater; 1,000 µg/L if benzene has not been detected in groundwater.



SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE
AUBURN, WA AND POVERTY BAY, WA (2020)

N

Scale: 1"=2,000'

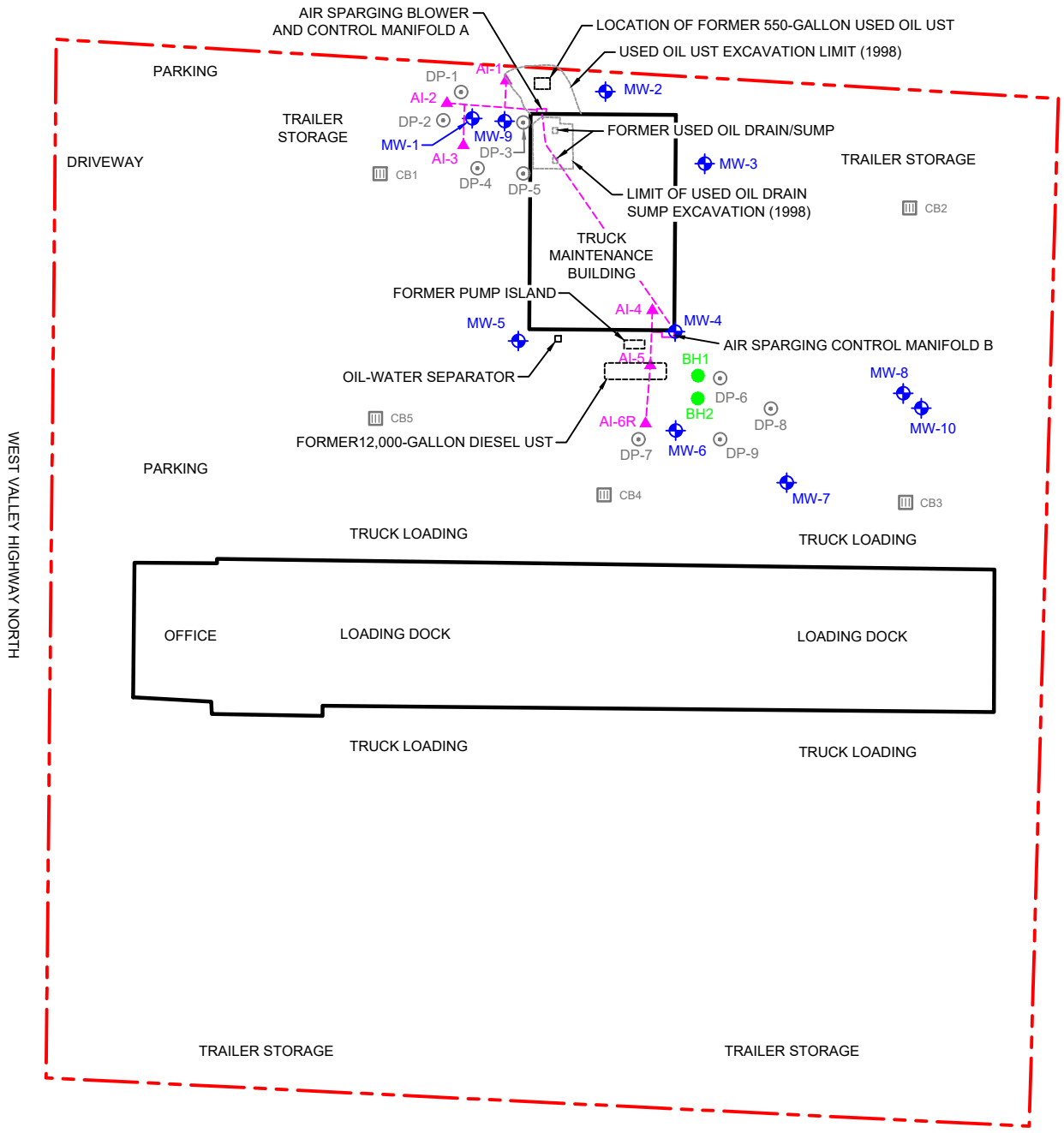
0 1,000 2,000 4,000

A & M Engineering and Environmental Services, Inc.
Consulting - Design - Construction - Remediation

SITE LOCATION MAP

QUARTERLY GROUNDWATER MONITORING REPORT - MARCH 2022
FORMER PROVISIONERS EXPRESS FACILITY
2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON

SCALE:	DATE:	FIGURE NO.
AS SHOWN	3/24/22	1
APPROVED BY:	DRAWN BY:	PROJECT NO.
DJL	SRM	2004-0003



LEGEND

- AIR SPARGING WELL
- MONITORING WELL
- HOLLOW STEM AUGER BORING
- DIRECT-PUSH BORING (OCTOBER 2013)
- CATCH BASIN
- UST UNDERGROUND STORAGE TANK
- APPROXIMATE SITE PROPERTY BOUNDARY

N

Scale: 1"=80'

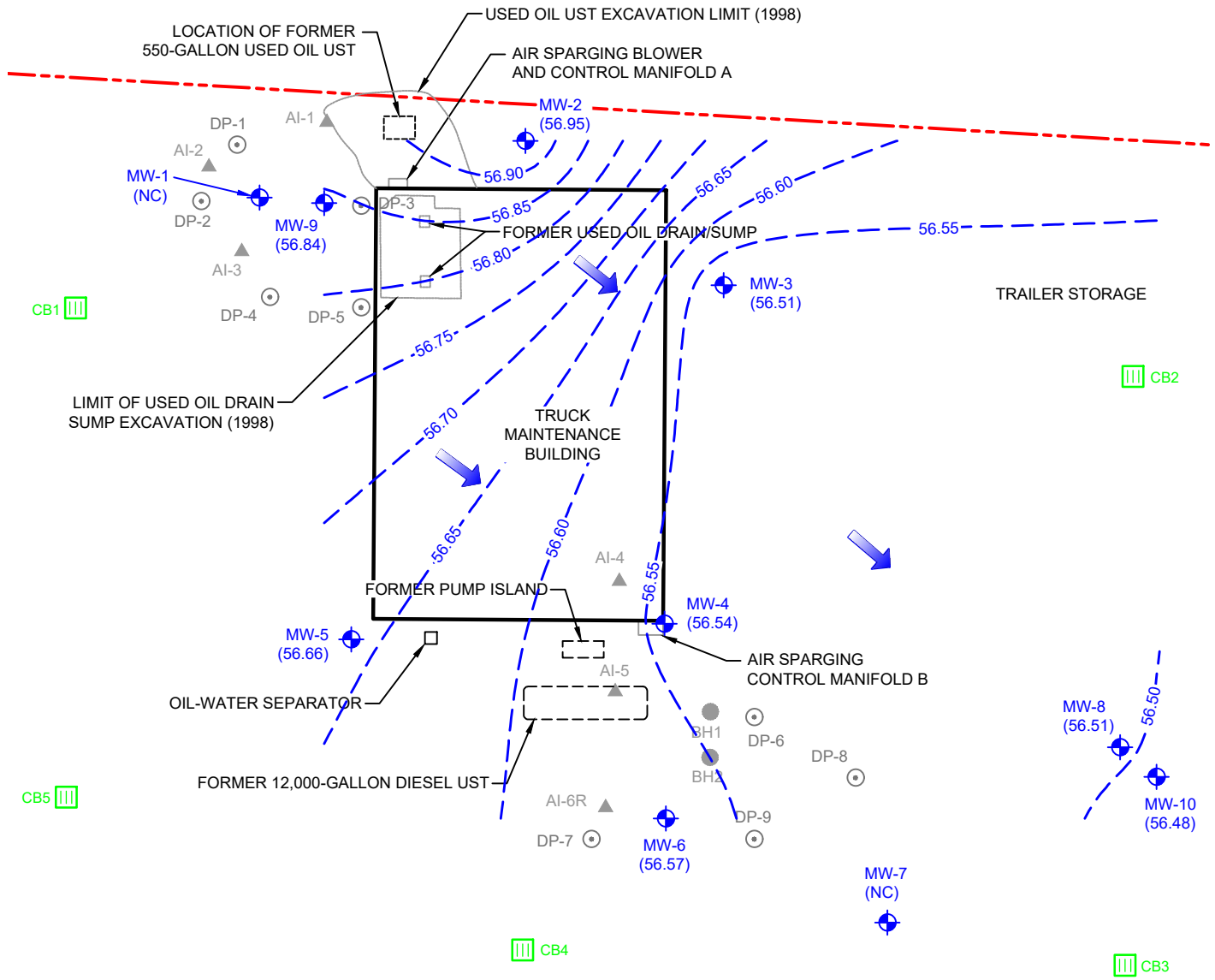
0 40 80 160

A & M Engineering and Environmental Services, Inc.
Consulting - Design - Construction - Remediation

SITE MAP

QUARTERLY GROUNDWATER MONITORING REPORT - MARCH 2022
FORMER PROVISIONERS EXPRESS FACILITY
2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON

SCALE:	DATE:	FIGURE NO.
AS SHOWN	3/24/22	2
APPROVED BY:	DRAWN BY:	PROJECT NO.
DJL	SRM	2004-0003



LEGEND

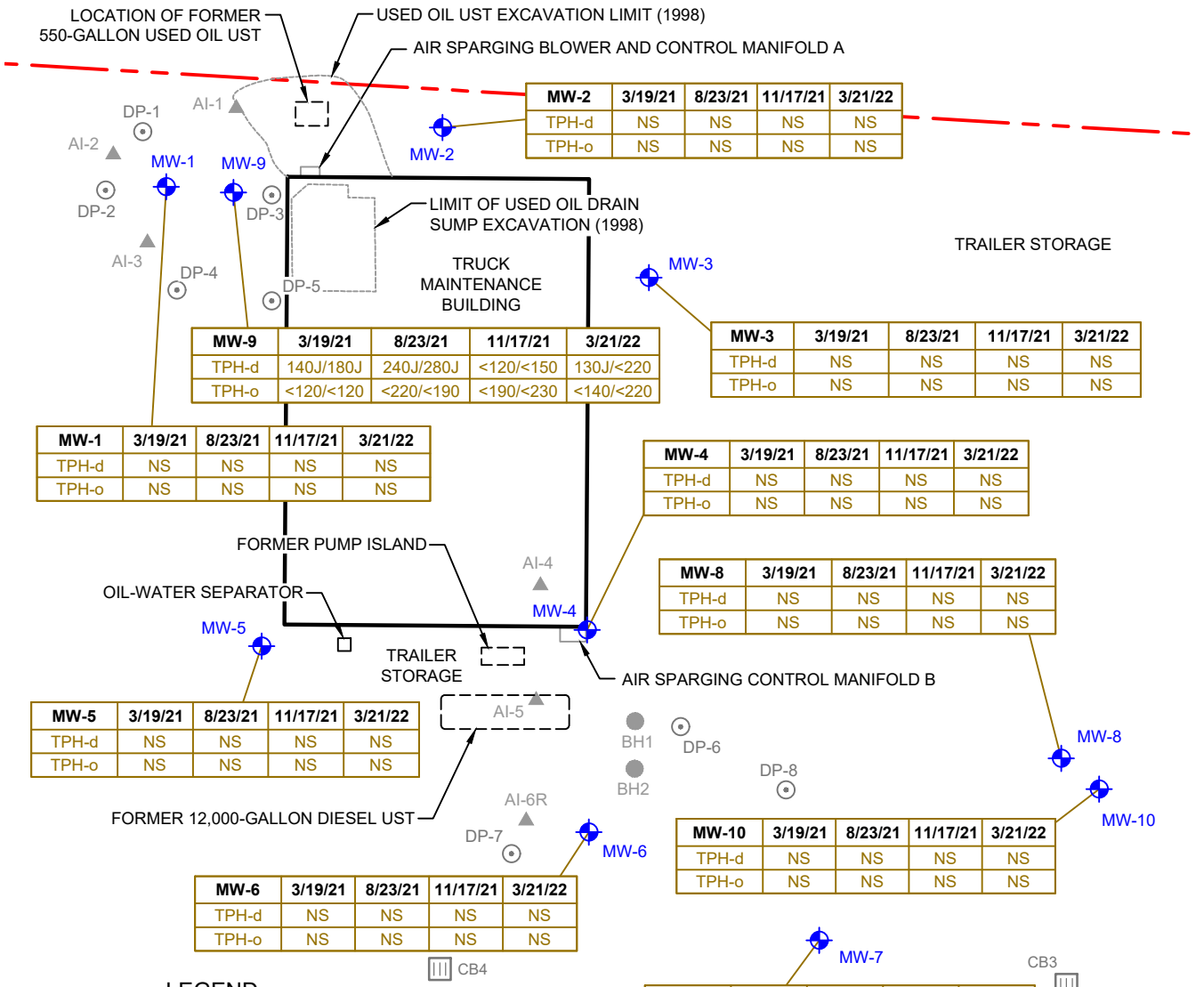
- 56.90 — GROUNDWATER ELEVATION CONTOUR
- (56.57) — GROUNDWATER ELEVATION
- (NC) — NOT COLLECTED
- APPROXIMATE FLOW DIRECTION OF SHALLOW GROUNDWATER
- MONITORING WELL
- AIR SPARGING WELL
- HOLLOW STEM AUGER BORING
- DIRECT-PUSH BORING (OCTOBER 2013)
- CATCH BASIN
- UST — UNDERGROUND STORAGE TANK
- APPROXIMATE SITE PROPERTY BOUNDARY

A & M Engineering and Environmental Services, Inc.
Consulting - Design - Construction - Remediation

GROUNDWATER CONTOUR - MARCH 21, 2022

QUARTERLY GROUNDWATER MONITORING REPORT - MARCH 2022
FORMER PROVISIONERS EXPRESS FACILITY
2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON

SCALE:	DATE:	FIGURE NO.
AS SHOWN	3/24/22	3
APPROVED BY:	DRAWN BY:	PROJECT NO.
DJL	SRM	2004-0003



MW-2	3/19/21	8/23/21	11/17/21	3/21/22
TPH-d	NS	NS	NS	NS
TPH-o	NS	NS	NS	NS

MW-3	3/19/21	8/23/21	11/17/21	3/21/22
TPH-d	NS	NS	NS	NS
TPH-o	NS	NS	NS	NS

MW-9	3/19/21	8/23/21	11/17/21	3/21/22
TPH-d	140J/180J	240J/280J	<120/<150	130J/<220
TPH-o	<120/<120	<220/<190	<190/<230	<140/<220

MW-1	3/19/21	8/23/21	11/17/21	3/21/22
TPH-d	NS	NS	NS	NS
TPH-o	NS	NS	NS	NS

MW-4	3/19/21	8/23/21	11/17/21	3/21/22
TPH-d	NS	NS	NS	NS
TPH-o	NS	NS	NS	NS

MW-8	3/19/21	8/23/21	11/17/21	3/21/22
TPH-d	NS	NS	NS	NS
TPH-o	NS	NS	NS	NS

MW-5	3/19/21	8/23/21	11/17/21	3/21/22
TPH-d	NS	NS	NS	NS
TPH-o	NS	NS	NS	NS

MW-10	3/19/21	8/23/21	11/17/21	3/21/22
TPH-d	NS	NS	NS	NS
TPH-o	NS	NS	NS	NS

MW-6	3/19/21	8/23/21	11/17/21	3/21/22
TPH-d	NS	NS	NS	NS
TPH-o	NS	NS	NS	NS

MW-7	3/19/21	8/23/21	11/17/21	3/21/22
TPH-d	NS	NS	NS	NS
TPH-o	NS	NS	NS	NS

LEGEND

- <220/<190 PRIMARY AND DUPLICATE SAMPLE RESULTS
- TPH-d DIESEL RANGE HYDROCARBONS
- TPH-o OIL RANGE HYDROCARBONS
- NS NOT SAMPLED
- < NOT REPORTED AT OR ABOVE LABORATORY METHOD REPORTING LIMITS
- RED VALUE EXCEEDS MTCA METHOD A CLEANUP LEVEL
- AIR SPARGING WELL
- MONITORING WELL
- HOLLOW STEM AUGER BORING
- DIRECT-PUSH BORING (OCTOBER 2013)
- CATCH BASIN
- UST UNDERGROUND STORAGE TANK
- APPROXIMATE SITE PROPERTY BOUNDARY
- J ESTIMATED CONCENTRATION, BELOW METHOD REPORTING LIMIT, ABOVE METHOD DETECTION LIMIT

ALL ANALYTICAL RESULTS ARE IN MICROGRAMS PER LITER (µg/L)

Scale: 1"=40'

0 20 40 80

A & M Engineering and Environmental Services, Inc.
Consulting - Design - Construction - Remediation

GROUNDWATER ANALYTICAL RESULTS
QUARTERLY GROUNDWATER MONITORING REPORT - MARCH 2022
FORMER PROVISIONERS EXPRESS FACILITY
2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON

SCALE:	DATE:	FIGURE NO.
AS SHOWN	3/28/22	4
APPROVED BY:	DRAWN BY:	PROJECT NO.
DJL	SRM	2004-0003

ATTACHMENT A
FIELD SAMPLING DATA SHEETS

FIELD SAMPLING DATA SHEET
LOW-FLOW GROUNDWATER SAMPLING

PROJECT NAME: ESTES West WELL ID: MW-9

SITE ADDRESS: Auburn, WA LABEL CODE: EW-03 21 22-01 (14:30)

DUPLICATE ID: -02 (14:45)

Wind From	N	NE	E	SE	S	SW	W	NW	Light	Medium	Heavy
Weather	Sunny		Cloudy		(Rain)		_____?		Temperature:	50 °F	____ °C

WELL DATA

Date	Time	Casing Diameter	DT-Product	DT-Water	Product Thickness
3-21-22	13:45	2	—	4.07	—

PUMP/INTAKE DEPTH (ft btoc): _____

WATER QUALITY DATA MS mV

Time	Liters	PH	Temp	DO	Spec. Cond.	Redox	Turbidity
1417	0.5	6.44	11.0	4.12	89.2	164	CLEAR *
1419	0.7	6.41	11.1	4.01	85.5	149	↓
1421	0.9	6.31	11.3	3.59	85.0	147	
1423	1.1	6.31	11.3	3.60	84.6	146	
1425	1.3	6.31	11.3	3.61	83.9	146	

GROUNDWATER SAMPLE DATA

Sample Date: 3-21-22

Sample Time: 14:30 DUP 14:45

Bottle Type	√	Amount & Volume		Preservative	Filter	
VOA Glass			40 ml	HCl	No	
Amber Glass	√	2	250 ml	HCl	No	
Poly			250 ml			
Total Bottles		X2	DUP			

Notes: CLEANED OUT MUCK IN MWS. BLACK & OILY SILT INSIDE SEVERAL MONUMENTS BUT NOT INSIDE CASING. * yellow TINT
WL HELD @ 4.28' PUMP RATE 0.1 LPM

Sampled By: Steve McCray Signature: [signature]

8

ESTES WEST GW SAMPLE

3-21-22 RAIN, 50°F

13:20 ATM ONSITE. BEGIN WLS

WELL	DTW	WELL	DTW
*MW-1	NM	MW-6	4.19
MW-2	3.90	**MW-7	NM
MW-3	4.29	MW-8	3.19
MW-4	4.39	MW-9	4.07
MW-5	4.24	MW-10	3.32

* UNDER DUMPSTER ** UNDER TRAILER HITCH

14:00 CALIBRATE MATRUS & BEGIN SAMPLE @ MW-9

1515 ATM OFFSITE

ATTACHMENT B
LABORATORY ANALYTICAL REPORT

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

April 06, 2022

Dan Landry
A & M Engineering and Environmental Services, Inc.
1176 West 7th Avenue
Eugene, OR 97402

RE: Project: 2004-0003 Task 1 Former Provis
Pace Project No.: 10601849

Dear Dan Landry:

Enclosed are the analytical results for sample(s) received by the laboratory on March 24, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
(612)607-1700
Project Manager

Enclosures

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 2004-0003 Task 1 Former Provis
Pace Project No.: 10601849

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
*Please Note: Applicable air certifications are denoted with an asterisk (*).

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 2004-0003 Task 1 Former Provis
Pace Project No.: 10601849

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10601849001	**EW-032122-01**	Water	03/21/22 14:30	03/24/22 08:50
10601849002	**EW-032122-02**	Water	03/21/22 14:45	03/24/22 08:50

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 2004-0003 Task 1 Former Provis
Pace Project No.: 10601849

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10601849001	**EW-032122-01**	NWTPH-Dx	EB3	4	PASI-M
10601849002	**EW-032122-02**	NWTPH-Dx	TT2	4	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 2004-0003 Task 1 Former Provis
Pace Project No.: 10601849

Sample: EW-032122-01 **Lab ID: 10601849001** Collected: 03/21/22 14:30 Received: 03/24/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS LV	Analytical Method: NWTPH-Dx Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis								
Diesel Fuel Range	**0.13J**	mg/L	0.41	0.12	1	03/24/22 14:55	03/25/22 13:52	68334-30-5	
Motor Oil Range	**<0.19**	mg/L	0.41	0.19	1	03/24/22 14:55	03/25/22 13:52		
Surrogates									
o-Terphenyl (S)	67	%.	50-150		1	03/24/22 14:55	03/25/22 13:52	84-15-1	
n-Triacontane (S)	73	%.	50-150		1	03/24/22 14:55	03/25/22 13:52		

Sample: EW-032122-02 **Lab ID: 10601849002** Collected: 03/21/22 14:45 Received: 03/24/22 08:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS LV	Analytical Method: NWTPH-Dx Preparation Method: EPA Mod. 3510C Pace Analytical Services - Minneapolis								
Diesel Fuel Range	**<0.14**	mg/L	0.48	0.14	1	03/28/22 17:49	03/30/22 11:11	68334-30-5	
Motor Oil Range	**<0.22**	mg/L	0.48	0.22	1	03/28/22 17:49	03/30/22 11:11		
Surrogates									
o-Terphenyl (S)	81	%.	50-150		1	03/28/22 17:49	03/30/22 11:11	84-15-1	
n-Triacontane (S)	79	%.	50-150		1	03/28/22 17:49	03/30/22 11:11		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 2004-0003 Task 1 Former Provis
Pace Project No.: 10601849

QC Batch: 805475
QC Batch Method: EPA Mod. 3510C
Analysis Method: NWTPH-Dx
Analysis Description: NWTPH-Dx GCS LV
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10601849001

METHOD BLANK: 4275583 Matrix: Water
Associated Lab Samples: 10601849001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Diesel Fuel Range	mg/L	<0.12	0.40	0.12	03/25/22 12:25	
Motor Oil Range	mg/L	<0.18	0.40	0.18	03/25/22 12:25	
n-Triacontane (S)	%.	58	50-150		03/25/22 12:25	
o-Terphenyl (S)	%.	63	50-150		03/25/22 12:25	

LABORATORY CONTROL SAMPLE & LCSD: 4275584 4275585

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Fuel Range	mg/L	2	1.4	1.4	71	71	50-150	0	20	
Motor Oil Range	mg/L	2	1.5	1.4	73	72	50-150	1	20	
n-Triacontane (S)	%.				74	53	50-150			
o-Terphenyl (S)	%.				74	72	50-150			

SAMPLE DUPLICATE: 4275586

Parameter	Units	10601849001 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Fuel Range	mg/L	0.13J	<0.14		30	
Motor Oil Range	mg/L	<0.19	<0.22		30	
n-Triacontane (S)	%.	73	71			
o-Terphenyl (S)	%.	67	71			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 2004-0003 Task 1 Former Provis
Pace Project No.: 10601849

QC Batch: 805922
QC Batch Method: EPA Mod. 3510C
Analysis Method: NWTPH-Dx
Analysis Description: NWTPH-Dx GCS LV
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10601849002

METHOD BLANK: 4278014 Matrix: Water
Associated Lab Samples: 10601849002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Diesel Fuel Range	mg/L	<0.12	0.40	0.12	03/30/22 10:38	
Motor Oil Range	mg/L	<0.18	0.40	0.18	03/30/22 10:38	
n-Triacontane (S)	%.	66	50-150		03/30/22 10:38	
o-Terphenyl (S)	%.	69	50-150		03/30/22 10:38	

LABORATORY CONTROL SAMPLE & LCSD: 4278015 4278016

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Fuel Range	mg/L	2	1.5	1.4	73	72	50-150	3	20	
Motor Oil Range	mg/L	2	1.6	1.5	78	77	50-150	1	20	
n-Triacontane (S)	%.				74	68	50-150			
o-Terphenyl (S)	%.				79	77	50-150			

SAMPLE DUPLICATE: 4278017

Parameter	Units	10602026002 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Fuel Range	mg/L	ND	<0.27		30	
Motor Oil Range	mg/L	ND	<0.42		30	
n-Triacontane (S)	%.	68	78			
o-Terphenyl (S)	%.	67	81			P1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 2004-0003 Task 1 Former Provis
Pace Project No.: 10601849

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

P1 Routine initial sample volume or weight was not used for extraction, resulting in elevated reporting limits.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 2004-0003 Task 1 Former Provis
Pace Project No.: 10601849

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10601849001	**EW-032122-01**	EPA Mod. 3510C	805475	NWTPH-Dx	805706
10601849002	**EW-032122-02**	EPA Mod. 3510C	805922	NWTPH-Dx	806539

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	A & M Engineering and Environmental Services, I	Report To:	DAN LANDRY	Attention:	ap@aandmengineering.com
Address:	1176 West 7th Avenue	Copy To:		Company Name:	A & M Engineering and Environmental Services, Inc.
	Eugene, OR 97402			Address:	10010 East 16th Street, Tulsa OK 74128
Email:		Purchase Order #:		Pace Quote:	
Phone:	Fax:	Project Name:	Former Provisioners West (Estes)	Pace Project Manager:	jennifer.gross@pacelabs.com,
Requested Due Date:	Standard	Project #:	~~2004-0002 Task 2~~ 2004-0003 TASK 1	Pace Profile #:	32819 / 1

Regulatory Agency: | State / Location: WA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	NWTPH-Dx (Diesel/Motor Oil)	Residual Chlorine (Y/N)	
1	EW-032122-01	WT	G	3/21/22	1430				2				X						X		001
2	EW-032122-02	WT	G	3/21/22	1445				2				X						X		002
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

WO# : 10601849

10601849

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Steve McCray	3/23/22	0900	[illegible] / PACE	03/24/22	8:50	4.7 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Steve McCray

SIGNATURE of SAMPLER: [signature] DATE Signed: 3-23-22

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: **06Jan2022** **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.04**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: A&M Engineering and Env. Services

Project #: WO#: 10601849

PM: JMG Due Date: 04/06/22

CLIENT: A&M Engineer

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: 5150 1599 9709 See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other:_____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☐ T1(0461) ☐ T2(1336) ☐ T3(0459) ☑ T4(0254) ☐ T5(0489) ☐ 01339252/1710 ☐ 122639816 ☐ 140792808 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☑ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 4.6 °C **Average Corrected Temp (no temp blank only):** _____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 4.7 °C

USDA Regulated Soil: (☑ N/A, Water sample/Other:_____) **Date/Initials of Person Examining Contents:** KN 03/24/22

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist ENV-FRM-MIN4-0154 and include with SCUR/COC paperwork.

Location (check one): ☐ Duluth ☑ Minneapolis ☐ Virginia

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4. If Fecal: ☐ <8 hrs ☐ >8hr, <24 hrs, ☐ >24 hrs
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other_____
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☑ Yes ☑ Yes	☐ No ☐ No		8.
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☑ Water ☐ Soil ☐ Oil ☐ Other-	☑ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** **See Exception** ☐ **ENV-FRM-MIN4-0142**
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☑ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water) and Dioxin/PFAS CJ31 3/24/22	☑ Yes	☐ No	☐ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** **See Exception** ☐ **ENV-FRM-MIN4-0142**
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Headspace in Methyl Mercury Container?	☐ Yes	☐ No	☑ N/A	
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☑ N/A	13. **See Exception** ☐ **ENV-FRM-MIN4-0140**
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☑ N/A	
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	Pace Trip Blank Lot # (if purchased):_____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted:_____ Date/Time:_____

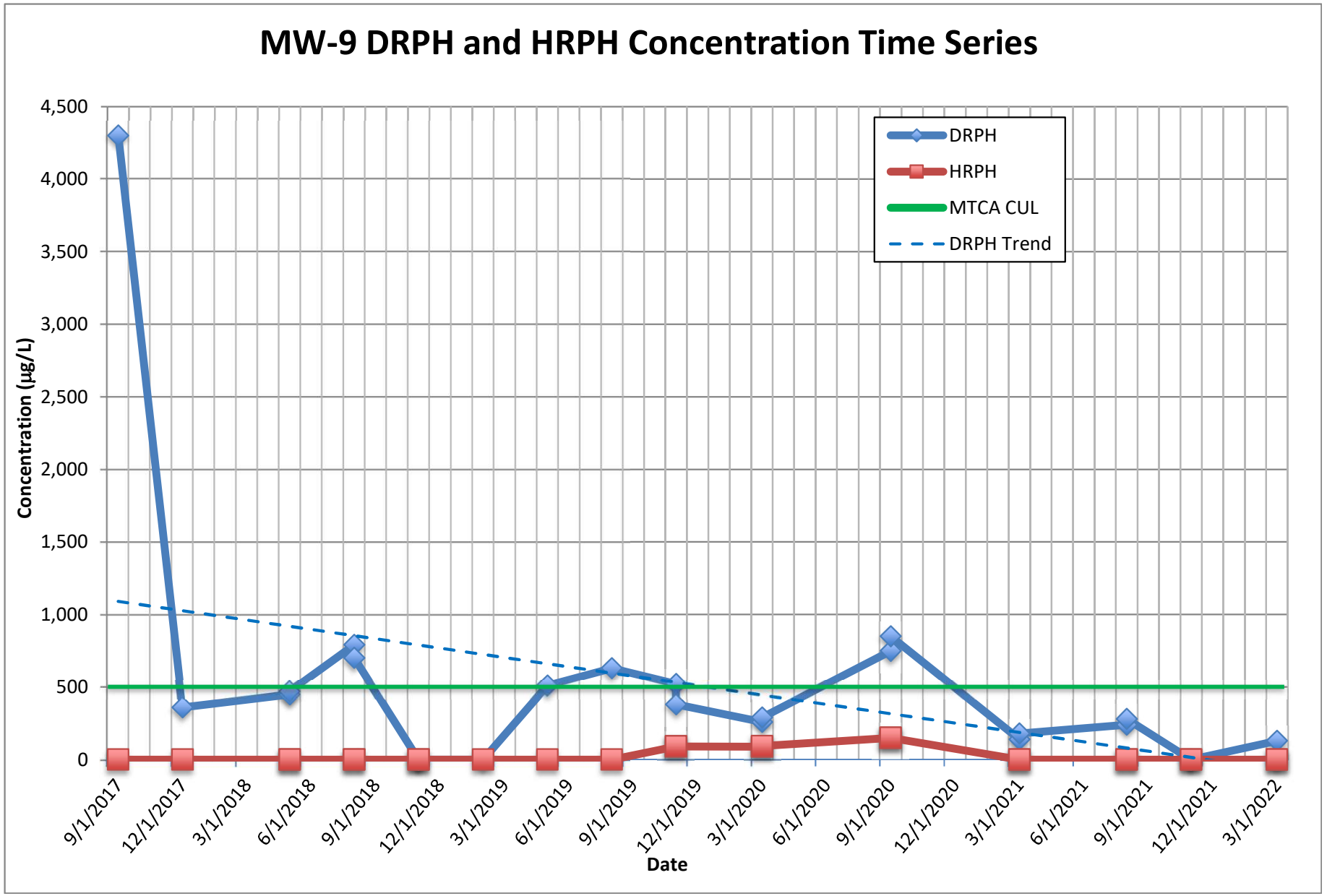
Comments/Resolution:_____

Project Manager Review: Jenni Gross **Date:** 3/24/22

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: KN (1)

ATTACHMENT C
GROUNDWATER ANALYSIS TREND CHART


MW-9 DRPH and HRPH Concentration Time Series
Concentration (µg/L)
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
DRPH
HRPH
MTCA CUL
DRPH Trend
9/1/2017
12/1/2017
3/1/2018
6/1/2018
9/1/2018
12/1/2018
3/1/2019
6/1/2019
9/1/2019
12/1/2019
3/1/2020
6/1/2020
9/1/2020
12/1/2020
3/1/2021
6/1/2021
9/1/2021
12/1/2021
3/1/2022
Date