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September 17, 2018
Project 2004-004.002

Ms. Jing Song
Washington Department of Ecology -
Toxic Cleanup Program, NWRO
3190 160th Avenue Southeast
Bellevue, Washington 98008

Re: 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

Dear Ms. Song:

Environmental Technologies Group, Inc. (ETG), on behalf of Commerce Road Terminals, LLC (CRT), has prepared this groundwater assessment work plan for the construction of a groundwater monitoring well down-gradient of MW-8 to provide a new point of compliance well for the former Provisioner's Express, Inc. (Provisioner's) facility (Site) located at 2102 West Valley Highway North in Auburn, Washington. This work plan presents: the proposed location; the methodologies for the construction, development, sampling, and analysis of groundwater samples; and a schedule for the proposed scope of work.

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 (Figure 1). Northwest quarter of Section 12, Township 21 North, Range 4 East, Willamette meridian in King County, Washington. The Tax Parcel No. for the property is 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 Site primarily for shipping/truck distribution and fleet maintenance.

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. 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). The location of the Site within the property is shown on Figure 2. 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 underground storage tank (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 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 ($\mu\text{g/L}$) and a benzene concentration of $12.0 \mu\text{g/L}$. The reported TPH-g concentration was less than its MTCA Method A CUL of $800 \mu\text{g/L}$. However, the benzene concentration exceeded the MTCA Method A CUL of $5 \mu\text{g/L}$. 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 also were 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 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 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 removed 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 reportedly rinsate from the UST that was spilled as it was removed from the excavation due to improper rigging and hoisting of the UST. EPI prepared the *Underground Storage Tank Site Assessment Report*, dated January 4, 2013 (EPI, 2013a), for submittal to Ecology's Underground Storage Tank Division.

In an opinion letter dated April 22, 2013, Ecology requested installation of two additional 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 rinsewater 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 (Figure 2); five locations around MW-1 and four locations downgradient of MW-6. Laboratory

analytical results indicated soil impacts around MW-1 were limited to location DP-3, which is 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 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 drilling 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 is to monitor groundwater conditions downgradient of the former 12,000-gallon diesel UST, which is a source area for diesel impacts to groundwater at the Site (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 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 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.

On June 5, 2018, 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 above MTCA Method A cleanup levels in the groundwater sample.

PROPOSED SCOPE OF WORK

In August 2018, during a Site meeting with ETG Ecology's project Manager recommended a new point of compliance well be installed down-gradient of MW-8 due to the asphalt sealer release. To address this recommendation, ETG proposes the installation of a new groundwater monitoring well approximately 10 feet west-southwest of well MW-8. The new point of compliance will allow down-gradient water quality assessment for the new release to begin, and for the existing releases in this location to continue, in fourth quarter 2018.

The following sections provide the proposed methods for site assessment.

Direct-push Soil Borings and Sample Collection

A licensed Washington well installer will be contracted to advance one (1) direct-push soil boring to depth of 13 feet bgs to construct a groundwater monitoring well. The monitoring well will be constructed approximately 10 feet west-southwest of well MW-8, down-gradient of the well. The proposed monitoring well location is presented on Figure 3.

Soil samples from the vadose zone will be collected continuously from the direct-push boring in acrylic liners and field screened using a photoionization detector (PID) for the presence of VOCs. A log of soil samples from the direct-push boring will be prepared in the field by a Washington Licensed Geologist, or a geologist working under the supervision of a Washington Licensed Geologist. The field log will be recorded on a standard ETG exploratory boring log form. The field log will include the project name and location, name of the drilling contractor, drilling method, sampling method, soil sample depths, and descriptions of the soils encountered. Subsurface lithology will be described consistent with ASTM D2488-84, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)*. A copy of ETG's standard boring log is presented in Appendix A.

During direct-push drilling activities, water used to clean samplers and drilling equipment will be stored on-Site in a United States Department of Transportation (USDOT) 55-gallon drum, pending off-Site disposal.

Well Construction

The groundwater monitoring well will be constructed using 2-inch diameter flush-threaded, schedule 40 polyvinyl chloride (PVC) blank casing and 10 feet of pre-packed 0.010-inch slotted PVC casing. The top of screen will be set at approximately 3 feet bgs. The well will be completed with a flush-mounted, traffic-rated monument. A typical well construction diagram for the proposed groundwater monitoring well is presented in Appendix A.

Well Development

A minimum of 24-hours following well installation, the new groundwater monitoring well will be developed by surging and then pumping. The well will be considered developed when at least 3 borehole volumes of water have been removed and the turbidity decreases noticeably. Development water will be stored in a USDOT 55-gallon drum pending disposal off-Site.

Well Survey

Following well installation, the top of casing and top of box elevation, as well as the northerly and easterly location for the new monitoring well be surveyed by a licensed Washington Land Surveyor. The well be surveyed to the North American Vertical Datum of 1988, consistent with the existing wells surveyed in August 2017.

Groundwater Sample Collection

The new groundwater monitoring well will be included in the Site's groundwater monitoring program. Depth-to-water will be measured in the well using an electric water well sounder probe. Groundwater sampling will be conducted utilizing *low-flow* sampling techniques in accordance with USEPA Publication 540/S-95/504, *Low Flow Ground-Water Sampling Procedures*, R.W. Puls & M.J. Barcelona. Field parameters including pH, temperature, DO, oxidation/reduction potential (ORP), and conductivity will be collected utilizing a flow-through cell. A copy of the "low-flow" sampling Standard Operating Procedure (SOP) and the groundwater sampling field sampling data sheets (FSDS) is provided in Appendix B.

Laboratory Analyses

Groundwater samples will be submitted under standard ETG chain-of-custody protocol to Pace Analytical Services, LLC (PACE) in Minneapolis, Minnesota. The groundwater samples will be analyzed for TPH-d and TPH-o by Ecology Method NWTPH-Dx. Dependent on laboratory analytical results for the third quarter 2018 groundwater monitoring event, the groundwater sample may also be analyzed for: full list volatile organic compounds (VOCs) by USEPA Method 8260B, carcinogenic polynuclear aromatic hydrocarbons (PAHs) by USEPA Method 8270D Selected Ion Monitoring (SIM), total lead by USEPA Method 6010D, and polychlorinated biphenyls (PCBs) by USEPA Method 8082A. For QA/QC purposes, a laboratory supplied trip blank will be maintained with the samples at all times during storage and transit.

Reporting

The results of the groundwater assessment will be included in the fourth quarter 2018 groundwater monitoring report. The assessment data in the report will include the

following: a summary of field activities including the number and types of samples, the methods used to collect and analyze the samples, and the name of the laboratory used to perform the analyses; a scaled Site map with the new well location; a boring well for the new well; laboratory reports, quality assurance/quality control (QA/QC) data, and chain-of-custody documentation; and summary tables of laboratory results. Groundwater laboratory analytical results will be compared to applicable MTCA Method A cleanup levels.

SCHEDULE

Well construction is scheduled to occur in October 2018. Well development and sampling would occur during the fourth quarter 2018 groundwater monitoring event scheduled for November 2018. The four quarter 2018 groundwater monitoring report would be submitted in December 2018.

If there are any questions regarding this work plan please call.

Sincerely,

Environmental Technologies Group, Inc.



David M. Seaver, L.G.
Senior Geologist



Daniel J. Landry
Senior Project Manager

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

cc: Ms. Angela Maidment, CRT

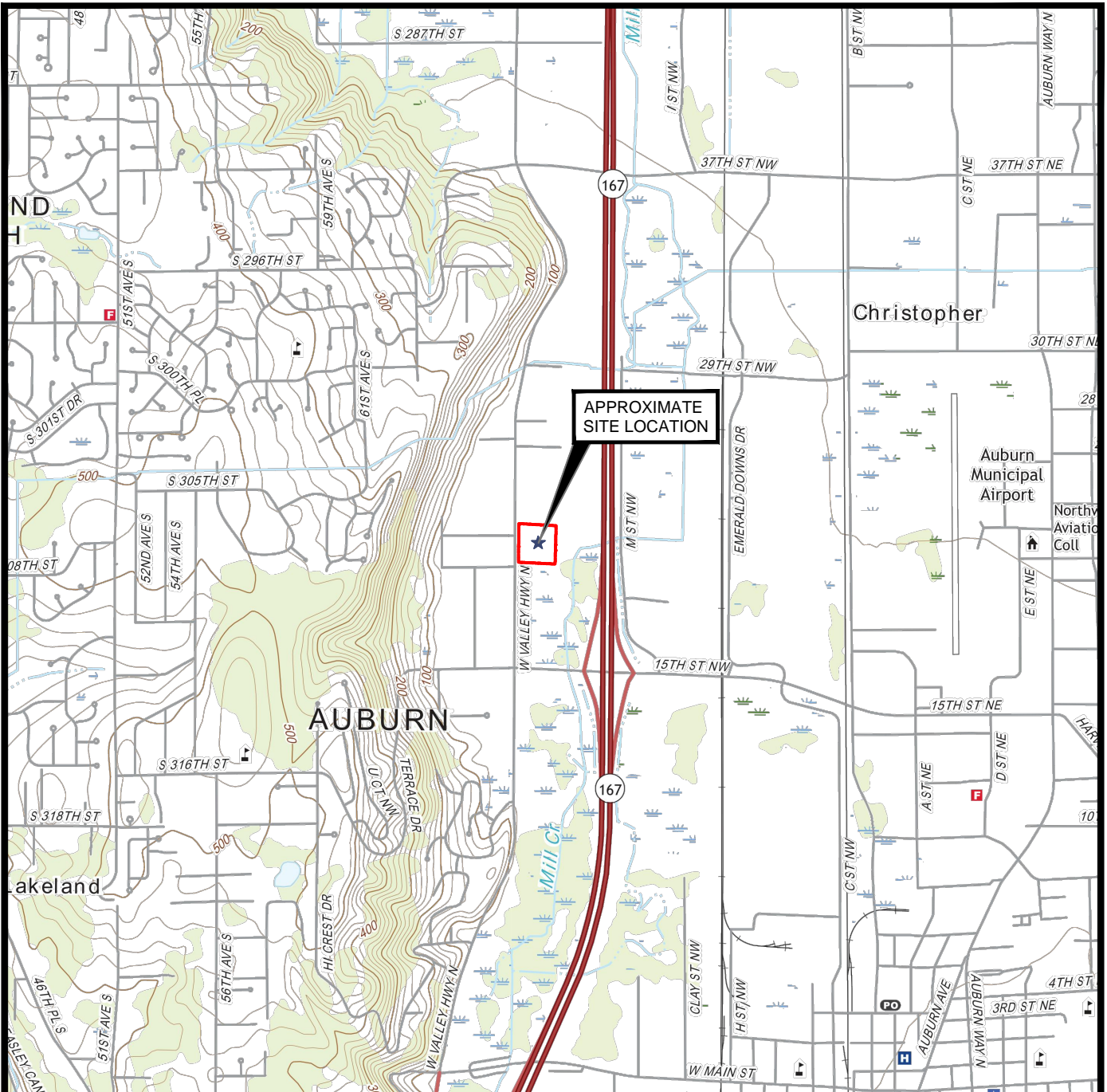
REFERENCES

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

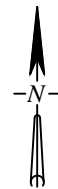
LIMITATIONS


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

Opinions and recommendations contained in this work plan apply to conditions existing when the scope of work was developed 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 completion of this work plan. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this work plan.

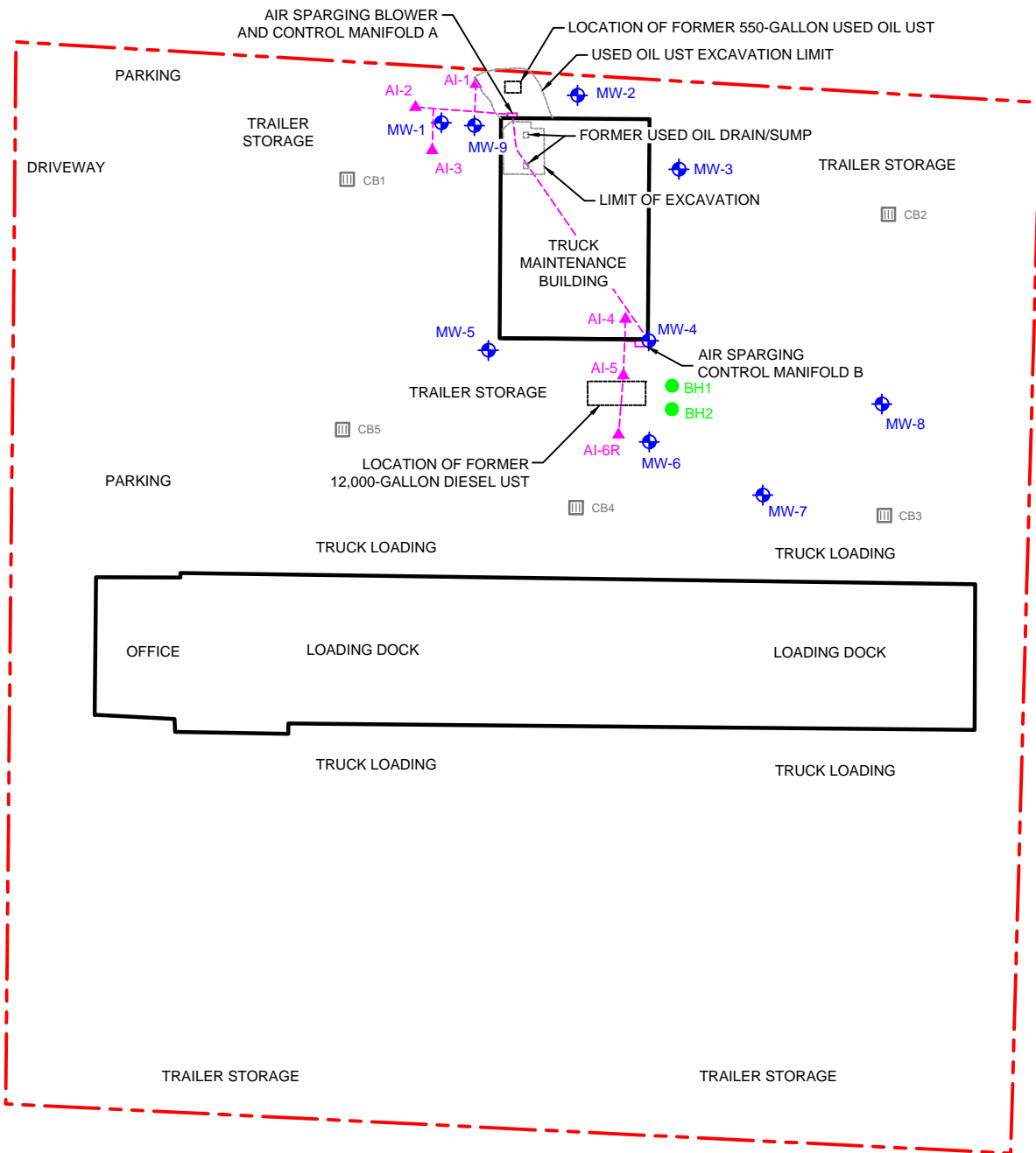


SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE
 AUBURN, WA AND POVERTY BAY, WA (2017)



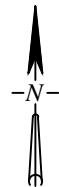
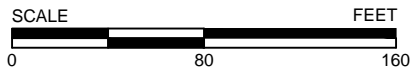
 <p>1176 West 7th Avenue Eugene, Oregon 97402 phone: 541-743-2600 fax: 541-743-2471 www.etgroupinc.com</p>	FIGURE TITLE	SITE LOCATION MAP	DATE	9/5/18
	DOCUMENT TITLE	GROUNDWATER ASSESSMENT WORK PLAN	SCALE	AS SHOWN
	CLIENT	ESTES EXPRESS LINES, INC.	DESIGNED BY	DJL
	LOCATION	FORMER PROVISIONERS EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON	APPROVED BY	DJL
			DRAWN BY	SRM
		PROJECT NUMBER	2004-004.002	
		FIGURE NUMBER	1	

WEST VALLEY HIGHWAY NORTH



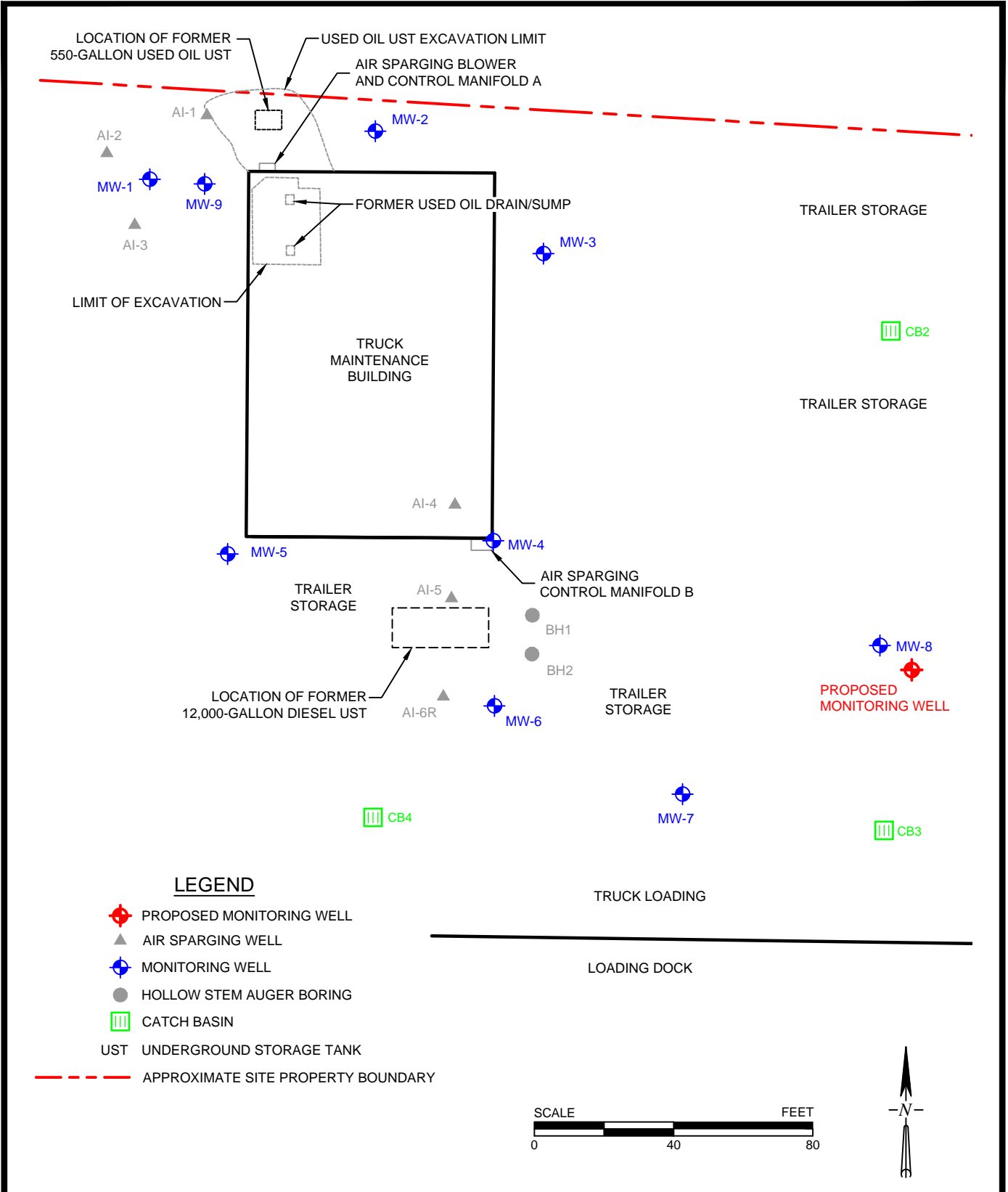
LEGEND

- ▲ AIR SPARGING WELL
- ◆ MONITORING WELL
- HOLLOW STEM AUGER BORING
- CATCH BASIN
- UST UNDERGROUND STORAGE TANK
- - - - - APPROXIMATE SITE PROPERTY BOUNDARY









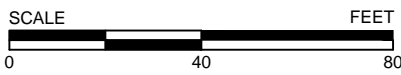
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FIGURE TITLE	SITE MAP	DATE	9/5/18
DOCUMENT TITLE	GROUNDWATER ASSESSMENT WORK PLAN	SCALE	AS SHOWN
CLIENT	ESTES EXPRESS LINES, INC.	DESIGNED BY	DJL
		APPROVED BY	DJL
		DRAWN BY	SRM
LOCATION	FORMER PROVISIONERS EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON	PROJECT NUMBER	2004-004.002
		FIGURE NUMBER	2



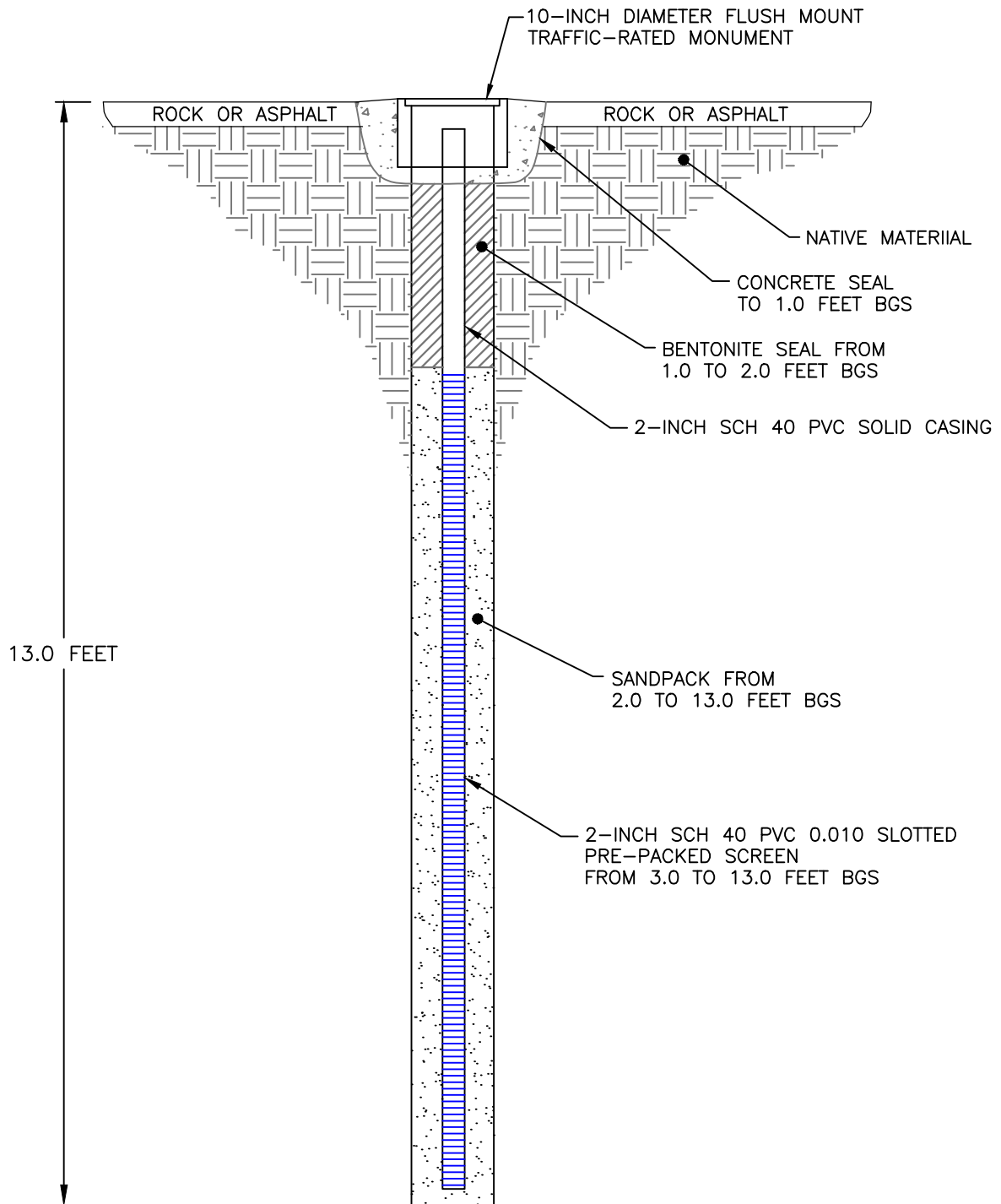
LEGEND

-  PROPOSED MONITORING WELL
-  AIR SPARGING WELL
-  MONITORING WELL
-  HOLLOW STEM AUGER BORING
-  CATCH BASIN
- UST UNDERGROUND STORAGE TANK
-  APPROXIMATE SITE PROPERTY BOUNDARY



 <p>1176 West 7th Avenue Eugene, Oregon 97402 phone: 541-743-2600 fax: 541-743-2471 www.etgroupinc.com</p>	FIGURE TITLE	PROPOSED MONITORING WELL LOCATION	DATE	9/5/18
	DOCUMENT TITLE	GROUNDWATER ASSESSMENT WORK PLAN	SCALE	AS SHOWN
	CLIENT	ESTES EXPRESS LINES, INC.	DESIGNED BY	DJL
	LOCATION	FORMER PROVISIONERS EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON	APPROVED BY	DJL
			DRAWN BY	SRM
		PROJECT NUMBER	2004-004.002	
		FIGURE NUMBER	3	

**ATTACHMENT A
STANDARD BORING LOG AND
TYPICAL MONITORING WELL CONSTRUCTION**



NOT TO SCALE



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FIGURE TITLE	TYPICAL MONITORING WELL CONSTRUCTION	DATE	9/61/18
DOCUMENT TITLE	GROUNDWATER ASSESSMENT WORK PLAN	SCALE	AS SHOWN
CLIENT	ESTES EXPRESS LINES, INC.	DESIGNED BY	DJL
LOCATION	FORMER PROVISIONERS EXPRESS FACILITY 2102 WEST VALLEY HIGHWAY NORTH, AUBURN, WASHINGTON	APPROVED BY	DJL
		DRAWN BY	SRM
		PROJECT NUMBER	2004-004.002
		FIGURE NUMBER	B-1

ATTACHMENT B
***LOW-FLOW* SAMPLING STANDARD OPERATING PROCEDURE**
AND FIELD SAMPLING DATA SHEET

Standard Operating Procedure Low-Flow Groundwater Sampling

Required Equipment

- Monitoring instruction sheet for each site
- Field logbook
- Field sampling data sheets (FSDS) – low-flow version
- Site maps
- Health & Safety plans
- Indelible black-ink pens and markers
- Sample labels
- Chain-of-custody forms
- Custody seals
- Shipping labels
- Water level meter
- pH/conductivity/temperature/ORP meter, turbidity meter, and dissolved oxygen meter
- Insulated cooler(s)
- Zip-Loc™ bags
- Sample bottles
- Ice
- Peristaltic pump

- Power source
- Flow-through cell
- Disposable tubing
- Decontamination equipment: Liquinox; methanol, and jugs for potable water

Typical Procedures

Preparation:

1. Record necessary data in field logbook.
2. Prepare sampling equipment including calibration of field meters prior to use.
3. Move equipment and supplies to sampling location.

Purging:

1. Remove well cap and measure static water level. Record reading(s) on FSDS sheet.
2. Determine tubing depth setting for well to be purged, cut appropriate length of disposable tubing from roll and attach to pump.
3. Slowly lower the tubing into the well to the required depth.
4. Connect the pump to the power source. If using a gas powered generator, make sure the generator is kept 30 feet downwind from the sampling system.
5. Connect the discharge tubing from the pump to the **base** of the flow-through cell. Place the probes for the calibrated field meters into the flow-through box. Attach small section of discharge tubing to the top of the flow-through cell and place end of hose into bucket to catch purge water.
6. Turn on the pump and adjust flow rate to no more than 0.5 liters per minute.
7. Record data on FSDS sheet.

8. Start recording field parameters on FSDS sheet every 3 minutes. Purging should continue at a constant rate until the parameters stabilize. Stabilization is considered achieved when three sequential measurements are within the ranges listed below:

Parameter	Stabilization Variance
pH	±0.1
Conductivity	±3%
Temperature	±10%
ORP	±10 mv
Dissolved Oxygen	±10%

Sampling:

1. After specified parameters have stabilized, reduce flow rate on pump to approximately 0.1 liters per minute.
2. Disconnect discharge tubing base of flow-through cell, being careful to contain water within the cell. Cut off approximately 0.5 feet from end of discharge tubing.
3. Place bucket beneath sampling tube to catch water.
4. Change sampling gloves.
5. Fill necessary sample bottles. Collect volatile organic compounds and gasoline range petroleum hydrocarbon samples first, if scheduled. When sampling for volatile organic compounds, keep flow rate at 0.1 liters per minute. When sampling for other analytes, increase flow rate may be increased to 0.5 liters per minute.
6. Record sampling information on FSDS sheet and in field logbook.

FIELD SAMPLING DATA SHEET LOW-FLOW GROUNDWATER SAMPLING

PROJECT NAME: _____ WELL ID: _____

SITE ADDRESS: _____ LABEL CODE: _____

DUPLICATE ID: _____

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

WELL DATA

Date	Time	Casing Diameter	DT-Product	DT-Water	Product Thickness

PUMP/INTAKE DEPTH (ft btoc): _____

WATER QUALITY DATA

Time	DTW	Liters	PH	Temp	DO	Spec. Cond.	Redox	Turb

GROUNDWATER SAMPLE DATA

Sample Date: _____

Sample Time: _____

Bottle Type	√	Amount & Volume	Preservative	Filter	
VOA Glass		40 ml	HCl	NA	
Amber Glass		1 liter	HCl/None	NA	
Poly			HNO3		
Total Bottles					

Notes: _____

Sampled By: _____

Signature: _____