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Santa Ana, CA 92705
t 714.919.6500

November 13, 2024

Mrs. Nancy Sawka
Oregon Department of Environmental Quality
Western Region Eugene Office
165 East Seventh Avenue, Suite 1000
Eugene, Oregon 97401

DEQ Tanks File No.: 20-20-0844

Third Quarter 2024 Groundwater Monitoring Report

United Pacific #5468
5720 Main Street
Springfield, Oregon

Dear Mrs. Sawka:

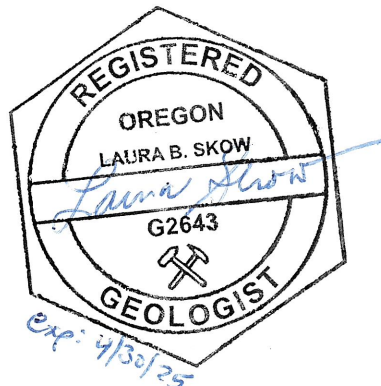
On behalf of United Pacific (UP), Montrose Environmental Services, Inc. (Montrose) is pleased to provide the *Third Quarter 2024 Groundwater Monitoring Report* (Report) for the above referenced Site (**Figure 1**). This Report presents a summary of the liquid-phase hydrocarbon (LPH) removal activities conducted during the third quarter of 2024 and a summary of the results for groundwater monitoring conducted on September 24, 2024.

Groundwater monitoring results indicate that LPH sheen is present in several onsite wells and concentrations of dissolved-phase petroleum hydrocarbons exceeding the Oregon Department of Environmental Quality's (DEQ's) Risk Based Concentrations (RBCs) for the Ingestion and Inhalation from Tapwater for the occupational receptor scenario are present in groundwater beneath the Site. Monthly LPH removal and quarterly groundwater monitoring are recommended while remedial actions are implemented for the Site. Should you have questions regarding this report, the LPH removal activities, or the groundwater monitoring results, please contact the undersigned at (714) 919-6500.

Sincerely,

Montrose Environmental

Laura Skow, RG
Project Manager



c: Mr. Tom Robins, United Pacific

Third Quarter 2024 Groundwater Monitoring Report

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SITE INFORMATION

Monitoring and Sampling Date:	September 24, 2024
Site Location:	United Pacific #5468 5720 Main Street Springfield, Oregon 97478
United Pacific Contact:	Mr. Tom Robins
Montrose Contact:	Mrs. Laura Skow
Regulatory Agency:	Oregon Department of Environmental Quality Western Region Eugene Office DEQ Tanks File No.: 20-20-0844

WORK PERFORMED

During the third quarter 2024, Montrose coordinated with representatives of NW Natural and reviewed trenching plans for the new gas service to be installed for the Two Phase Extraction (TPE) remediation system to be pilot tested at the site. A schedule for gas line installation is pending from NW Natural.

In September 2024, Montrose met with subcontractors for a pre-construction meeting for trenching, underground piping, and construction of the remediation compound, temporary power pole installation, and to inspect the sewer lateral connection from the station building to the sewer main in preparation for installation of the TPE system. Construction and installation activities are anticipated to begin in the fourth quarter 2024, following installation of the new gas line by NW Natural.

During the period, Montrose prepared to install wells and soil vapor probes as requested by DEQ, which were proposed to further investigate the extent of impacts northwest of the site. In September 2024, access authorization was secured with the western adjacent property for installation of the borings and with the northern adjacent property for staging equipment during the field activities. Additionally, a geophysical survey was completed to identify subsurface utilities near the proposed boring locations (**Figure 2**). Drilling activities were recently completed, and the remaining fieldwork is scheduled for the fourth quarter 2024; the findings will be presented in a separate report.

On July 11, August 21, and September 24, 2024, Montrose performed LPH removal from select site wells using passive skimmers and manual bailing methods. A total of approximately 0.89 gallons of LPH and 5.9 gallons of groundwater were removed. LPH removal data for the reporting period are summarized in **Table 1**. On September 24, 2024, site wells not containing measurable amounts of LPH were sampled using DEQ approved low-flow purge sampling



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techniques. LPH removal and well gauging field data sheets for the third quarter of 2024 are included as **Appendix A**.

Groundwater samples were transported to a State approved environmental laboratory and analyzed for the presence of total petroleum hydrocarbons quantified as gasoline (TPH-Gx) by Method NWTPH-Gx, benzene, toluene, ethylbenzene, total xylenes (BTEX collectively), methyl tert-butyl ether (MTBE), naphthalene, 1-methyl naphthalene, 2-methyl naphthalene, 1,2-dibromoethane (EDB), and 1,2-dichloroethane (EDC) by Environmental Protection Agency (EPA) Method 8260D and total lead by EPA Method 7010. Note that the analysis plan was temporarily reduced from full scan volatile organic carbons (VOCs) to short list VOCs since the wells are known to be impacted and remediation is planned for the site. Full scan VOC analysis may be reinstated for future monitoring if directed by the DEQ, for compliance monitoring once remediation is initiated, or for initial screening of new wells installed at the Site.

Water quality parameters were measured in the field during sampling and are included in **Table 2**. Field-measured water quality parameters included dissolved oxygen (DO), oxidation reduction potential (ORP), temperature, potential hydrogen level (pH), electrical conductivity, and turbidity. Current and historical groundwater analytical results are presented in **Table 2** and **Table 3**, respectively. An area plan showing the Site and surrounding areas is presented as **Figure 2** and a site plan showing the detailed site configuration and monitoring well locations is presented as **Figure 3**. Site background information is included as **Appendix B**.

SUMMARY DATA

Monitoring Details

Monitoring Wells:	Onsite: 8	Offsite: 3
	Wells gauged: 11	Wells sampled: 9
Extraction Wells:	Onsite: 3	Offsite: 0
	Wells gauged: 3	Wells sampled: 2
Observation Wells:	Onsite: 4	Offsite: 0
	Wells gauged: 4	Wells sampled: 0
Purging Method:	Low-flow with submersible pump/dedicated tubing	
Sampling Method:	Grab	
Purge Water Disposal:	Onsite drum, pending disposal (16.6 gallons)	
Wells with LPH:	3	
LPH Thickness:	Seen to 0.00 feet	
Current Remediation Method:	Passive skimming and manual bailing	

Hydrological Parameters

Depth to Groundwater (below TOC):	Range: 10.49 to 13.45 feet
Groundwater Elevation:	Range: 497.73 to 499.69 feet amsl
Groundwater Flow Direction:	North-northwest



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Groundwater Gradient: 0.007 ft/ft
Average Groundwater Level Change: 0.23 feet decrease

Select Analytical Results (Table 2)

Wells with TPH-Gx: 6 Maximum: 20,000 µg/L (MW-2 & EW-4)
Wells with Benzene: 6 Maximum: 960 µg/L (EW-4)

THIRD QUARTER 2024 GROUNDWATER MONITORING RESULTS

Groundwater analytical results and field measurements for the third quarter 2024 sampling event are presented in **Tables 2, 3, and 4**. **Figure 4** shows the monitoring well locations with the corresponding analytical results for TPH-Gx, benzene, and MTBE. Note that groundwater analytical results are compared to the DEQ RBCs for the Ingestion and Inhalation from Tapwater for the occupational worker scenario. Groundwater monitoring results are summarized below:

- The static groundwater level decreased an average of 0.23 feet since the previous monitoring event on June 11 and 12, 2024.
- As shown in **Table 2**, groundwater elevations ranged from 497.73 to 499.69 feet above mean sea level (amsl). The groundwater flow direction and gradient were calculated for the Site using data from Wells MW-3, MW-5, and MW-11. The flow direction is toward the north-northwest at an approximate gradient of 0.007 feet per foot (ft/ft), which is generally consistent with the prior groundwater monitoring event. The groundwater gradient, flow direction, and groundwater elevation contours are shown on **Figure 5**. A summary of historical groundwater flow direction and gradient data is presented in **Table 5** and a rose diagram showing all measured groundwater flow directions and gradients measured to date is presented as **Figure 6**.
- Measurable LPH was not detected in any of the site wells; however, LPH sheen was observed in Wells, MW-5, MW-6 and EW-1R (**Figure 4**).
- Dissolved-phase TPH-Gx was detected in six of the eleven wells sampled at concentrations ranging from 710 micrograms per Liter (µg/L, MW-7) to 20,000 µg/L (MW-2 & EW-4). All six wells were with detected TPH-Gx concentrations exceed the applicable DEQ RBC of 450 µg/L. TPH-Gx was not detected in the remaining wells sampled at concentrations greater than the laboratory reporting limit (RL).
- Benzene was detected in six of the eleven wells sampled at concentrations ranging from 3.0 µg/L (MW-10) to 960 µg/L (EW-4), which exceed the applicable DEQ RBC of 2.1 µg/L. Benzene was not detected in the remaining wells sampled at concentrations greater than the laboratory RL (<1.0 µg/L).
- Toluene was detected in four wells at concentrations ranging from 240 µg/L (MW-1) to 2,500 µg/L (MW-2 & EW-4), all of which are below the DEQ RBC concentration of 6,300 µg/L.



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- Ethylbenzene was detected in seven wells at concentrations ranging from 2.9 µg/L (MW-10) to 630 µg/L (MW-2), all of which exceed the DEQ RBC of 6.4 µg/L for ethylbenzene with the exception of MW-10.
- Total xylenes were detected in seven wells at concentrations ranging from 3.0 µg/L (MW-10) to 3,500 µg/L (MW-2). The concentrations of total xylenes in four of the seven wells exceed the applicable DEQ RBC of 830 µg/L. Total xylenes were not detected in the remaining wells sampled at concentrations greater than laboratory RL (<2.0 µg/L).
- MTBE was not detected in any of the wells sampled at concentrations greater than the laboratory RL. Note that the laboratory RL for MTBE is 5.0 µg/L.
- Naphthalene was detected in six wells at concentrations ranging from 11 µg/L (MW-4) to 96 µg/L (EW-4), all of which exceed the DEQ RBC of 0.72 µg/L. 1-methyl naphthalene and 2-methyl naphthalene were detected in several wells at concentrations ranging from 6.8 µg/L to 37 µg/L and 5.8 µg/L to 55 µg/L, respectively; DEQ RBCs are not specified for 1-methyl naphthalene and 2-methyl naphthalene. EDB was not detected in any of the wells sampled at concentrations greater than the laboratory RL (<0.010 µg/L). EDC was not detected in any of the wells sampled at concentrations greater than the laboratory RL (<1.0 µg/L).
- Lead was not detected in any of the wells sampled at concentrations greater than the laboratory RL (<5.0 µg/L).
- Contaminants of concern (COCs) were not detected in the trip blank sample (TB-1). Low concentrations of toluene (2.7 µg/L) and total xylenes (12 µg/L) were reported in the equipment blank sample (EB-1), which may indicate potential field, transport, or lab contamination; other COCs were not detected in EB-1. The detected COCs are greater in most well samples than the equipment blank, therefore the sample results are considered valid and the data usable for its intended purpose.

Field measurements of DO levels ranged from 0.30 milligrams per liter (mg/L) at Well EW-4 to 3.01 mg/L at Well MW-3. ORP levels ranged from -79.9 millivolts (mV) measured at Well EW-2R to 111.8mV at Well MW-10.

A copy of the laboratory analytical report is provided as **Appendix C**. Groundwater monitoring field forms are provided as **Appendix D**. Montrose's Monitoring Well Sampling Protocols are included as **Appendix E**. Purge water generated during the groundwater monitoring event was placed into a 55-gallon drum and staged on site. When the drum is full arrangements will be made to have it transported to an appropriate disposal/recycling facility under manifest.



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LPH REMOVAL

LPH removal activities were conducted on July 11, August 21, and September 24, 2024. During each LPH removal event, skimmers were removed from the wells, emptied, and volumes of LPH and groundwater recorded (**Appendix A** and **Appendix D**). The wells were then gauged and depths to LPH and groundwater recorded. For remaining wells containing measurable LPH, manual LPH removal was conducted using disposable polyethylene bailers.

The well gauging and LPH removal activities will continue on a periodic basis as long as measurable amounts of LPH are detected in wells at the Site. To date, approximately 361.30 gallons of LPH and 3,727.7 gallons of impacted groundwater have been removed from site wells during the LPH removal activities (**Table 1**).

HYDROCARBON TREND AND DISTRIBUTION ANALYSIS

A summary of current and historical groundwater sample analytical results is provided in **Tables 2** and **3**, respectively. Groundwater elevation and LPH thickness trends are shown on **Chart 1** and TPH-Gx and benzene concentration trends are shown in **Charts 2** and **3**, respectively.

The average groundwater elevation beneath the Site has decreased approximately 0.23 feet since June 11 and 12, 2024 (previous monitoring event). **Chart 1** shows a groundwater elevation low occurring between July and September 2023; with a similar drop in groundwater elevations occurring around the same time in 2022 and 2021. The annual fluctuation in groundwater elevation is well documented since late 2020, the beginning of the current data set.

Measurable LPH was not present in site wells on September 24, 2024; a hydrocarbon sheen was present in Well MW-5, MW-6, and EW-1R. The distribution of LPH is currently centered near the USTs (confirmed source, historically) and LPH thicknesses exhibit a fluctuating but generally decreasing trend over the period of record (**Chart 1**). For example, the LPH thickness in Well MW-6 has decreased from a maximum thickness of 1.65 feet in March 2021 to a sheen in September 2024. Similarly, the LPH thickness in Well MW-5 has decreased from a maximum thickness of 0.23 feet in August 2021 to a sheen in September 2024 (**Table 1**). Further changes in the distribution and thickness of LPH beneath the Site is expected over time and LPH recovery efforts will continue as long as LPH is detectable in site wells.

TPH-Gx concentrations in the Site monitoring wells sampled exhibit fluctuating trends but generally decreased since the previous monitoring event. For example, the TPH-Gx concentration in Well MW-4 decreased from a maximum concentration of 190,000 µg/L on March 30, 2021 to 4,000 µg/L on June 29, 2023, rebounded to 19,000 µg/L on September 19, 2023, and has since decreased to 970 µg/L on September 24, 2024 (**Table 3**). The TPH-Gx concentration in Well MW-7 decreased from a maximum concentration of 24,000 µg/L on October 12, 2022 to 3,900 µg/L (December 12, 2023), rebounded to 6,100 µg/L (March 27, 2024) and then decreased to 710 µg/L (September 24, 2024). The fluctuations in COC concentrations appear to be following a trend of



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seasonal fluctuations where lows are typically seen during the winter months and highs are typically seen during the summer months. This trend is expected to continue with overall slight decreases until active remediation is implemented at the Site, at which time significant and permanent decreases in COC concentrations are expected.

Current LPH thicknesses and TPH-Gx, BTEX and MTBE concentrations are shown in **Figure 4** to illustrate the distribution of dissolved-phase hydrocarbons. As shown in **Figure 4**, LPH sheen was present in Wells MW-5, MW-6, and EW-1R located downgradient of the UST cavity; the highest COC concentrations are present in Wells MW-2, EW-2R and EW-4, located south of the USTs. The extent of the groundwater plume is defined to the west, northwest and southeast by perimeter Wells MW-8, MW-9, and MW-11, but is not fully defined to the north of Well MW-10 or east of Well MW-1.

CONCLUSION AND RECOMMENDATIONS

Based on the third quarter 2024 groundwater monitoring results, an LPH sheen is present in Wells MW-5, MW-6, and EW-1R. Dissolved-phase hydrocarbon concentrations in groundwater samples collected from Wells MW-1, MW-2, MW-4, MW-7, MW-10, EW-2R, and EW-4 exceed applicable DEQ RBCs for the Ingestion and Inhalation from Tapwater for the occupational worker scenario. The groundwater plume is defined to the west, northwest and southeast by perimeter Wells MW-8, MW-9, and MW-11, but is not fully defined to the north of Well MW-10 or east of Well MW-1.

As requested by the DEQ, one additional offsite monitoring well and two soil vapor probes are proposed to further investigate impacts at the site (Figure 2) and one monitoring well, located east of MW-1, that was precleared during prior assessment activities remains to be installed to define the plume to the east. Drilling activities were recently completed, and the remaining field activities are scheduled for the fourth quarter 2024; the findings will be presented in a separate report.

Montrose is coordinating with utility providers for installation of the gas line and power pole necessary to implement the TPE pilot test as proposed in the Workplan for Remedial Pilot Testing (December 5, 2022). Schedules are pending from the utility providers, but installation is anticipated to occur in the fourth quarter 2024 and followed by trenching and underground piping installation. Montrose will update the DEQ on the procurement progress and anticipated schedule for construction activities. Montrose recommends continuing monthly LPH gauging and removal activities to recover LPH from Site wells and quarterly groundwater monitoring to evaluate groundwater quality beneath the Site. The next groundwater monitoring event is planned for the fourth quarter of 2024 (December 2024).



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United Pacific #5468
Springfield, Oregon

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November 13, 2024

Montrose is pleased to be of service to UP and the DEQ. If there are questions regarding this report or if additional site information is required, please do not hesitate to contact Montrose at (714) 919-6500.



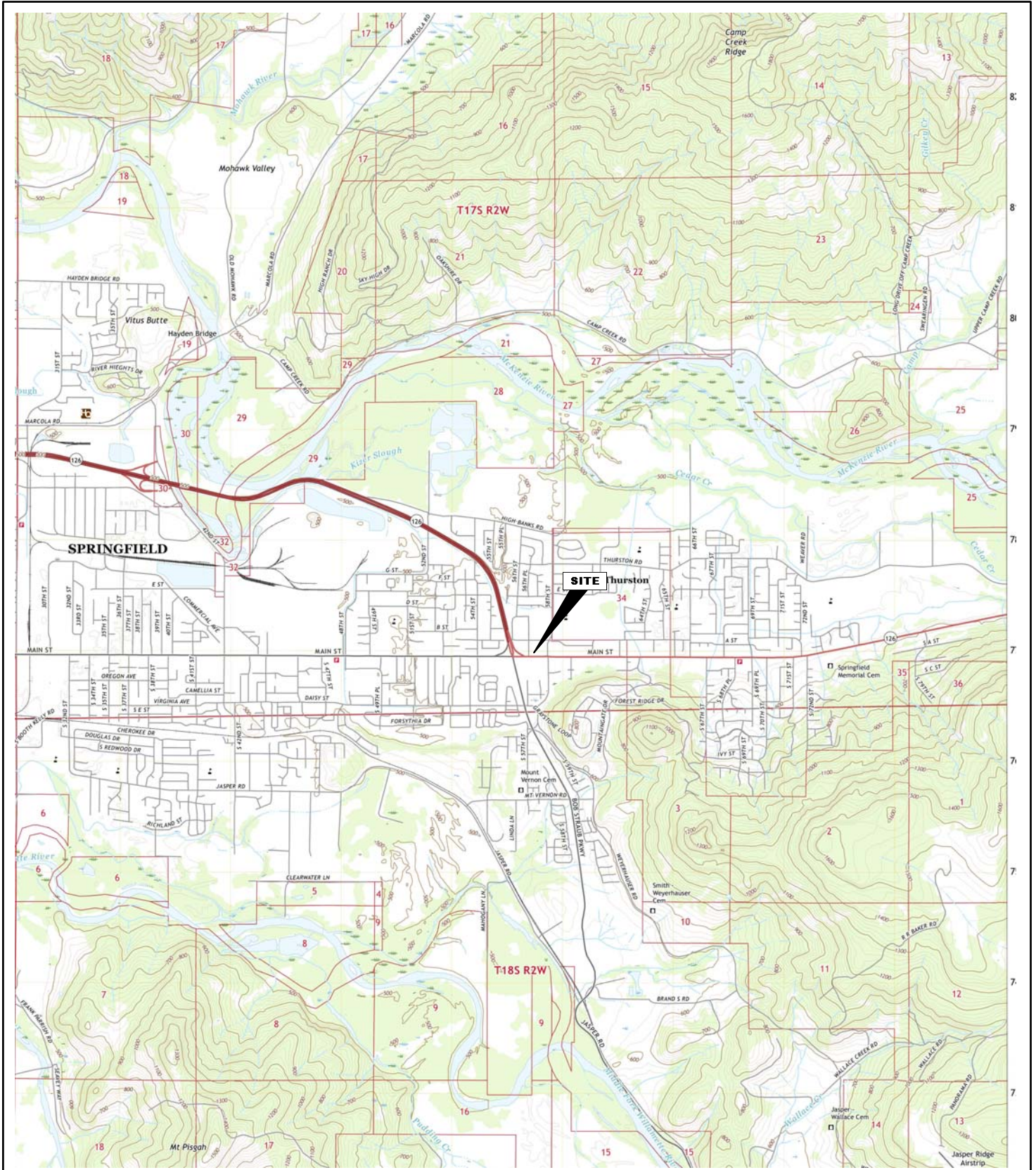
Third Quarter 2024 Groundwater Monitoring Report

ACRONYMS:

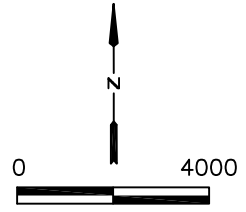
amsl:	above mean sea level
bgs:	below ground surface
BTEX:	benzene, toluene, ethylbenzene, and total xylenes
btoc:	below top of casing
°C:	degrees Celsius
DEQ:	Oregon Department of Environmental Quality
DO:	dissolved oxygen
DTW:	depth to water
EW:	extraction well
GW Δ:	change (difference) in water elevation since last measurement
Fe ²⁺ :	ferrous iron
ft:	feet
ft/ft:	feet per foot
GW:	groundwater
µg/L:	micrograms per Liter
µs/cm:	microsiemens per centimeter
LPH:	liquid phase hydrocarbons
mg/L	milligrams per Liter
MTBE:	methyl tert-butyl ether
mV:	millivolts
MW:	monitoring well
na:	not applicable/not analyzed
nm:	not measured
ns:	not sampled
NTU:	Nephelometric Turbidity Unit
ORP:	oxidation reduction potential
pH:	potential hydrogen
ppm:	parts per million
PQL:	practical quantitation limit
RBC:	Risk based concentration
RL:	reporting limit
TPH-Dx:	total diesel-range petroleum hydrocarbons
TPH-Gx:	total gasoline-range petroleum hydrocarbons
TPH-Ox:	total lube oil-range petroleum hydrocarbons
UST:	underground storage tank
VOCs:	volatile organic compounds



FIGURES



Map Information:
 U.S. GEOLOGICAL SURVEY
 SPRINGFIELD QUADRANGLE
 44°02'46.0"N 122°55'43.0"W



APPROX. SCALE: 1" = 4000'

FIGURE 1
 SITE LOCATION MAP

United Pacific #5468
 5720 Main Street,
 Springfield, OR 97478

DATE DRAWN
 11/10/2022

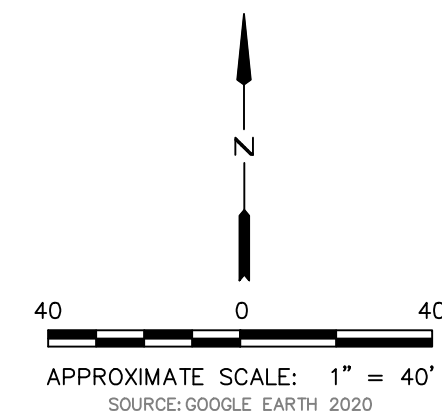
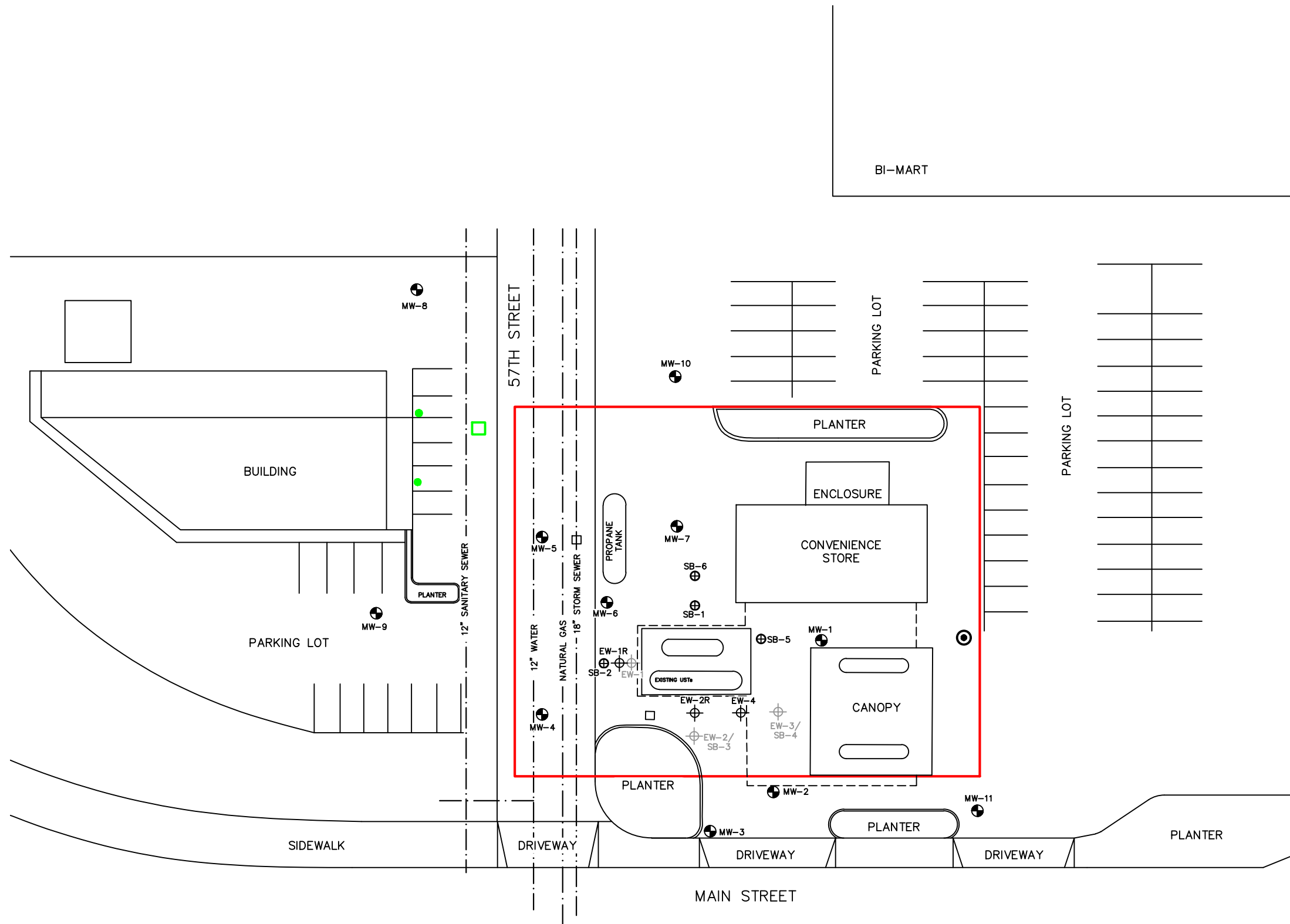
PROJECT NO.
 006811


FILE NO.
 006811F1-SLM

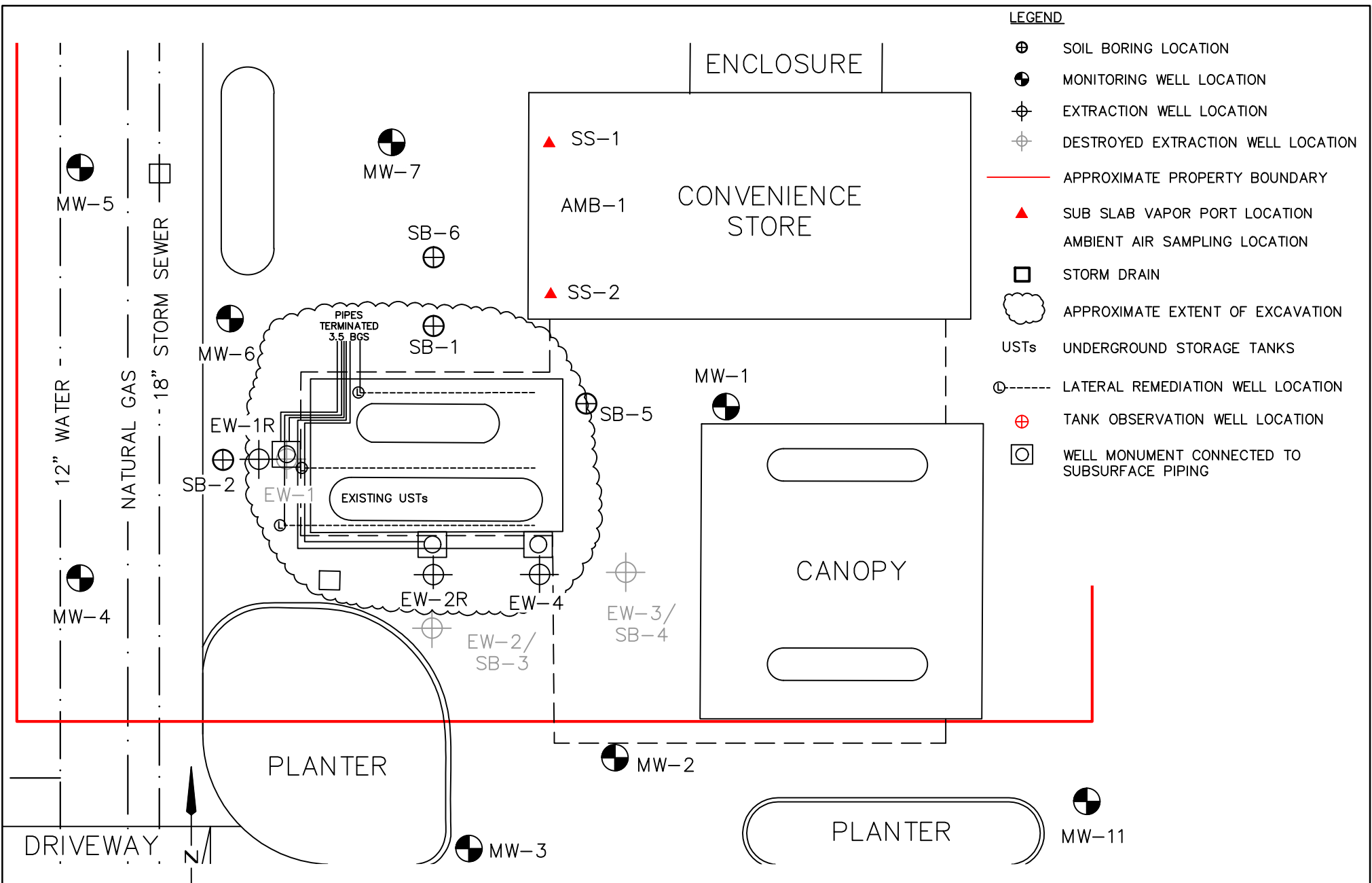
BI-MART

LEGEND

- ⊕ SOIL BORING LOCATION
- ⊙ MONITORING WELL LOCATION
- ⊕ EXTRACTION WELL LOCATION
- ⊕ DESTROYED EXTRACTION WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED VAPOR PROBE LOCATION
- ⊙ PRECLEARED PROPOSED WELL LOCATION (MW-12)



 <p>1631 E. Saint Andrew Place, Santa Ana, CA 92705 t 714.919.6500</p>	FIGURE 2	DATE DRAWN 10/18/2024
	AREA PLAN	PROJECT NO. 027409
	United Pacific #5468 5720 Main Street, Springfield, OR 97478	FILE NO. 027409F2-AP



LEGEND

- ⊕ SOIL BORING LOCATION
- ⊗ MONITORING WELL LOCATION
- ⊕ EXTRACTION WELL LOCATION
- ⊕ DESTROYED EXTRACTION WELL LOCATION
- APPROXIMATE PROPERTY BOUNDARY
- ▲ SUB SLAB VAPOR PORT LOCATION
- AMBIENT AIR SAMPLING LOCATION
- STORM DRAIN
- ☁ APPROXIMATE EXTENT OF EXCAVATION
- USTs UNDERGROUND STORAGE TANKS
- ⊕ LATERAL REMEDIATION WELL LOCATION
- ⊕ TANK OBSERVATION WELL LOCATION
- ⊕ WELL MONUMENT CONNECTED TO SUBSURFACE PIPING

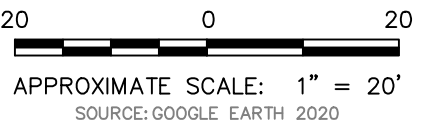


FIGURE 3

SITE PLAN

United Pacific #5468
5720 Main Street,
Springfield, OR 97478

DATE DRAWN
5/23/2024

PROJECT NO.
027409

FILE NO.
027409F3-SP

- LEGEND**
- ⊕ SOIL BORING LOCATION
 - ⊗ MONITORING WELL LOCATION
 - ⊕ EXTRACTION WELL LOCATION
 - ⊕ DESTROYED EXTRACTION WELL LOCATION
 - APPROXIMATE PROPERTY BOUNDARY
 - STORM DRAIN
 - ↙ 0.007 FT/FT APPROXIMATE GROUNDWATER DIRECTION AND MAGNITUDE IN FEET PER FOOT
 - USTs UNDERGROUND STORAGE TANKS
 - LPH LIQUID PHASE HYDROCARBONS
 - - - APPROXIMATE CURRENT EXTENT OF LPH
 - 0.01 FEET OF LPH IN WELL
 - <5.0 COMPOUND NOT DETECTED AT OR ABOVE LABORATORY METHOD REPORTING LIMIT
 - TPHg TOTAL GASOLINE-RANGE PETROLEUM HYDROCARBONS
 - B BENZENE
 - MTBE METHYL TERT-BUTYL ETHER
 - ug/L MICROGRAMS PER LITER
 - * NOT SAMPLED DUE TO LPH PRESENCE
 - SHEEN** SHEEN WAS OBSERVED
 - BOLD** DETECTION EXCEEDS RISK BASED CONCENTRATION (RBC)

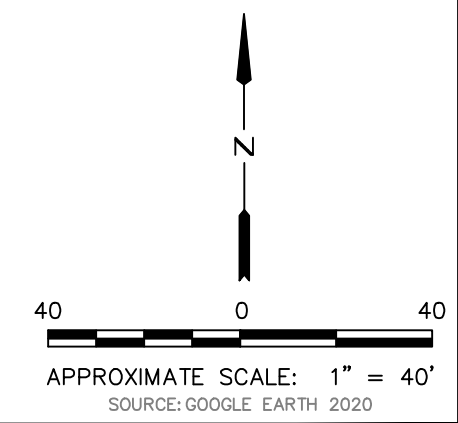
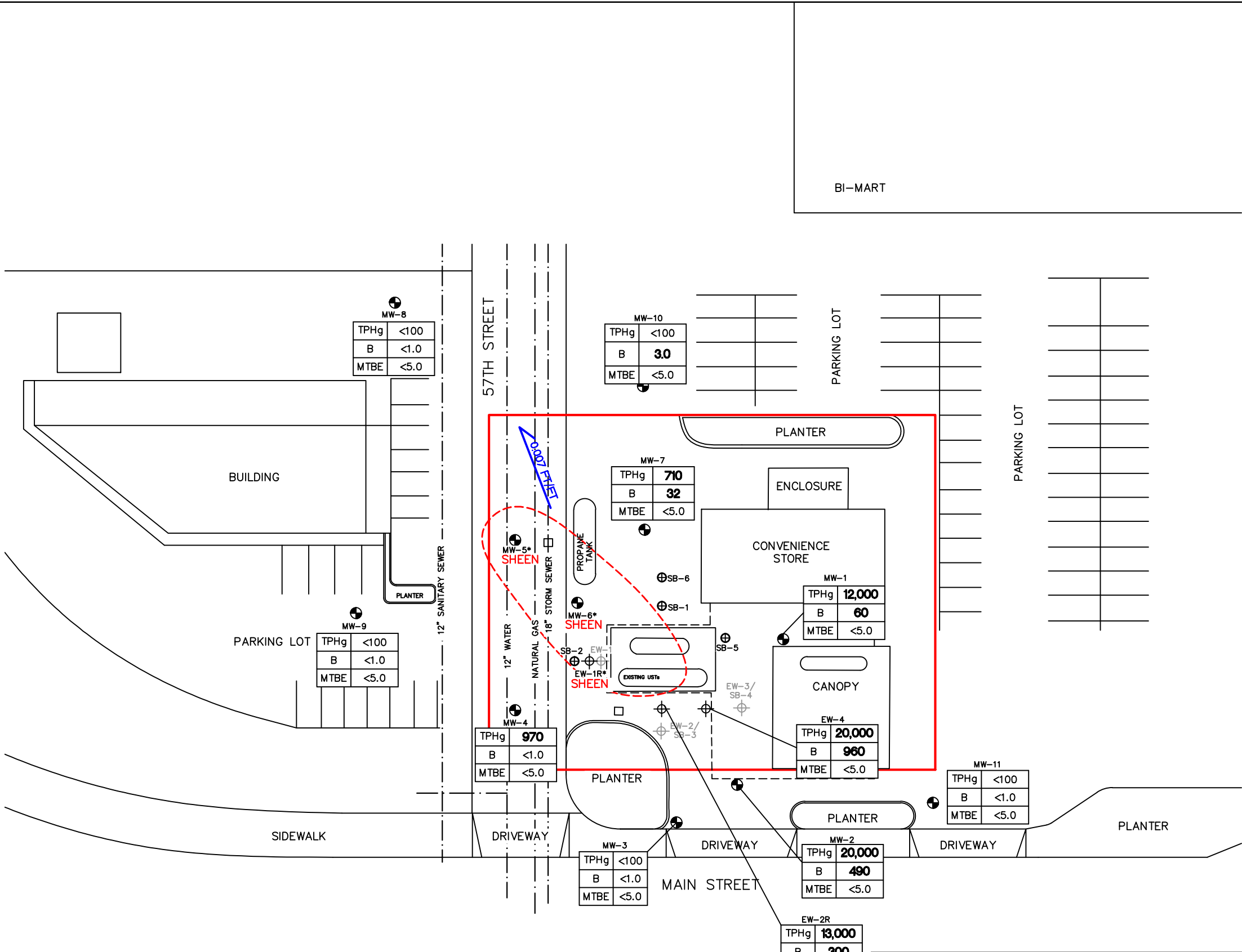


FIGURE 4
GROUNDWATER ANALYTICAL MAP
 SEPTEMBER 24, 2024

United Pacific #5468
 5720 Main Street,
 Springfield, OR 97478

DATE DRAWN 11/12/2024
PROJECT NO. 027409
FILE NO. 027409F4-GAR

- LEGEND**
- ⊕ SOIL BORING LOCATION
 - ⊗ MONITORING WELL LOCATION
 - ⊕ EXTRACTION WELL LOCATION
 - ⊕ DESTROYED EXTRACTION WELL LOCATION
 - APPROXIMATE PROPERTY BOUNDARY
 - STORM DRAIN
 - ↙ 0.007 FT/FT APPROXIMATE GROUNDWATER DIRECTION AND MAGNITUDE IN FEET PER FOOT
 - USTs UNDERGROUND STORAGE TANKS
 - 499.17 GROUNDWATER ELEVATION IN FEET AMSL
 - AMSL ABOVE MEAN SEA LEVEL
 - - - APPROXIMATE GROUNDWATER CONTOUR IN FEET AMSL; DASHED WHERE INFERRED
 - ⊕ DEPRESSION CONTOUR
- NOTE: WELLS MW-3, MW-5 AND MW-11 USED TO CALCULATE GROUNDWATER FLOW DIRECTION AND GRADIENT

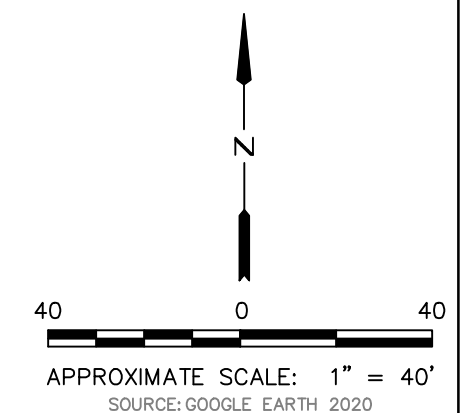
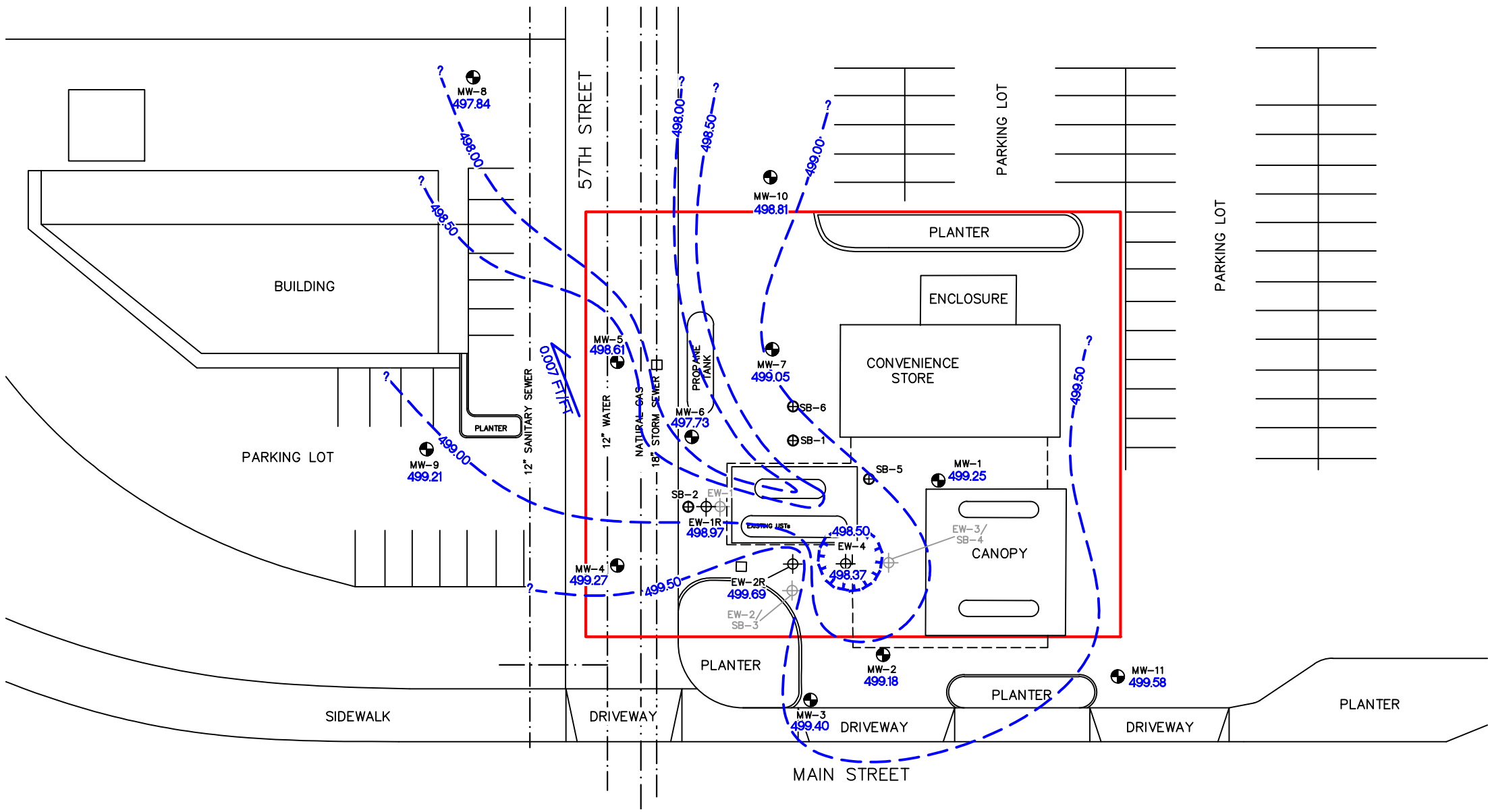


FIGURE 5
GROUNDWATER CONTOUR MAP
SEPTEMBER 24, 2024

United Pacific #5468
5720 Main Street,
Springfield, OR 97478

DATE DRAWN 11/12/2024
PROJECT NO. 027409
FILE NO. 027409F5-GCM

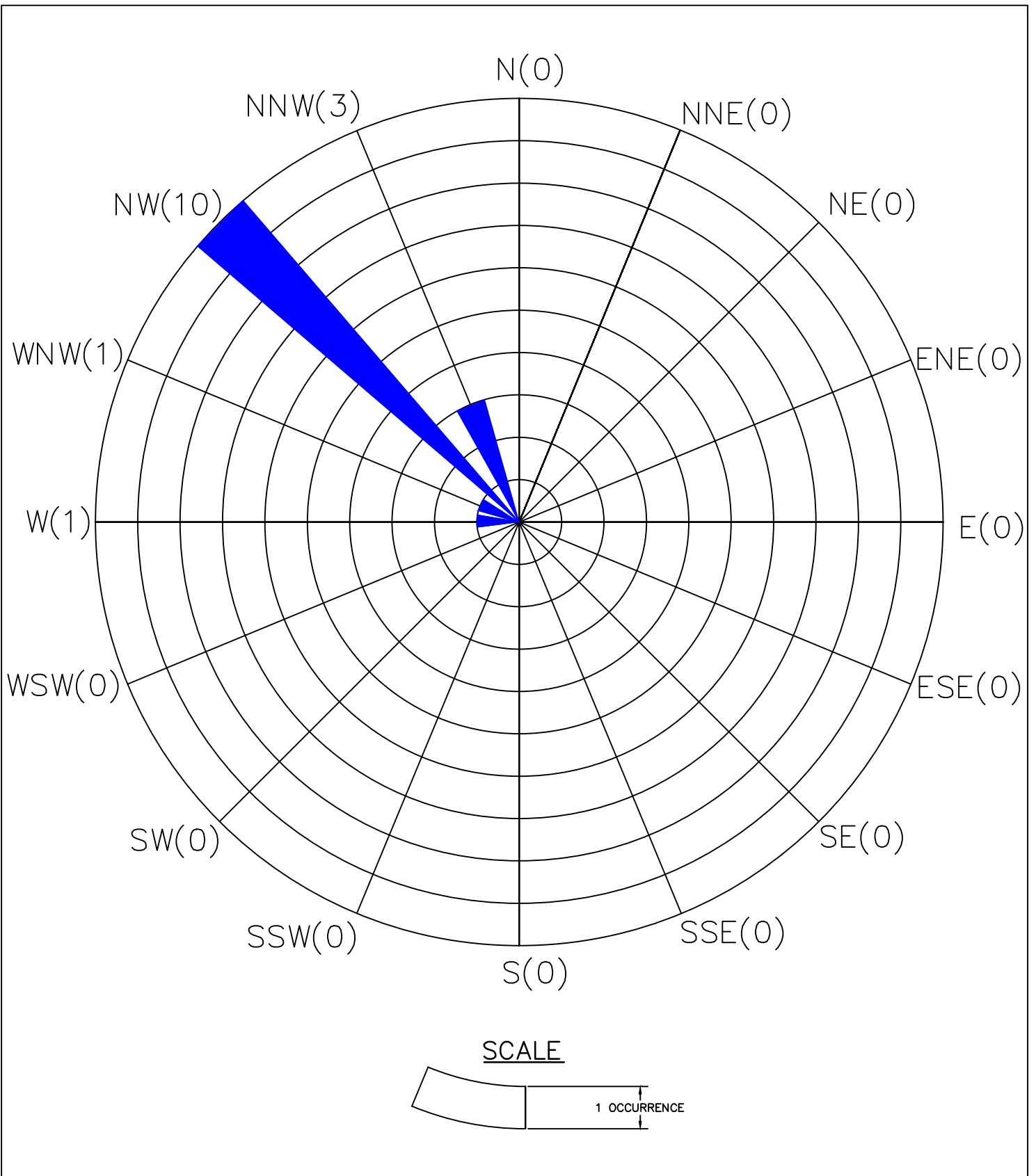


FIGURE 6
**GROUNDWATER FLOW DIRECTION
 ROSE DIAGRAM**

 United Pacific #5468
 5720 Main Street,
 Springfield, OR 97478

DATE DRAWN 10/21/2024
PROJECT NO. 027409
FILE NO. 027409F6-RD

TABLES

Table 1
United Pacific #5468
Summary of LPH Removal
Springfield, Oregon
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Well ID	Date Measured	TOC Elevation (ft amsl)	Depth to LPH (ft btoc)	Depth to Water (ft btoc)	LPH Thickness (ft)	Thickness Change (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)	Estimated LPH Removed (gal)	Cumulative LPH Removed (gal)	Estimated Water Removed (gal)	Cumulative Water Removed (gal)
EW-1	11/19/20 ⁽⁴⁾	510.97	--	11.05	--	--	499.92	--	--	--	700.0	700.0
	01/13/21 ⁽³⁾		--	10.48	--	--	500.49	0.57	--	--	--	700.0
	01/27/21 ⁽⁴⁾		10.70	10.92	0.22	0.22	500.22	-0.27	0.35	0.35	1.4	701.4
	02/03/21 ⁽³⁾		10.55	10.57	0.02	-0.20	500.42	0.20	5.00	5.35	50.0	751.4
	02/25/21 ⁽⁵⁾		10.55	10.59	0.04	0.02	500.41	0.00	0.25	5.60	3.0	754.4
	03/30/21		11.05	11.14	0.09	0.05	499.90	-0.51	0.00	5.60	0.0	754.4
	04/20/21		11.55	11.73	0.18	0.09	499.38	-0.52	0.00	5.60	0.0	754.4
	05/20/21 ⁽⁷⁾		11.80	11.94	0.14	-0.04	499.14	-0.24	15.00	20.60	135.0	889.4
	06/08/21		--	11.73	0.00	-0.14	499.24	0.10	0.00	20.60	0.0	889.4
	06/23/21 ⁽⁸⁾		--	11.74	0.00	0.00	499.23	-0.01	0.00	20.60	1.7	891.1
	07/08/21		--	11.96	0.00	0.00	499.01	-0.22	0.00	20.60	0.0	891.1
	07/22/21		12.11	12.12	0.01	0.01	498.86	-0.15	0.25	20.85	1.0	892.1
	08/05/21		--	12.18	0.00	-0.01	498.79	-0.07	0.00	20.85	0.0	892.1
	08/18/21		--	12.29	0.00	0.00	498.68	-0.11	0.00	20.85	0.0	892.1
	09/01/21		--	12.26	0.00	0.00	498.71	0.03	0.00	20.85	0.0	892.1
	09/22/21		--	11.72	0.00	0.00	499.25	0.54	0.00	20.85	1.4	893.5
	10/06/21		--	11.40	0.00	0.00	499.57	0.32	0.00	20.85	0.0	893.5
	10/20/21		--	11.37	0.00	0.00	499.60	0.03	0.00	20.85	0.0	893.5
	11/03/21		--	11.02	0.00	0.00	499.95	0.35	0.00	20.85	0.0	893.5
	11/17/21		--	10.81	0.00	0.00	500.16	0.21	0.00	20.85	0.0	893.5
	12/08/21		--	10.68	0.00	0.00	500.29	0.13	0.00	20.85	0.0	893.5
	12/22/21		--	9.90	0.00	0.00	501.07	0.78	0.00	20.85	0.0	893.5
	01/11/22		--	10.20	0.00	0.00	500.77	-0.30	0.00	20.85	0.0	893.5
01/26/22	--	10.37	0.00	0.00	500.60	-0.17	0.00	20.85	0.0	893.5		
02/07/22	--	10.26	0.00	0.00	500.71	0.11	0.00	20.85	0.0	893.5		
Well Decommissioned on 02/08/22												
EW-1R	10/12/22 ⁽⁴⁾	510.86	12.17	12.19	0.02	--	498.69	--	0.10	0.10	2.0	2.0
	11/14/22		--	10.90	0.00	-0.02	499.96	1.27	0.00	0.10	0.0	2.0
	12/19/22		--	11.32	0.00	0.00	499.54	-0.42	0.00	0.10	3.0	5.0
	01/18/23		--	10.91	0.00	0.00	499.95	0.41	0.00	0.10	0.0	5.0
	02/28/23		--	10.69	0.00	0.00	500.17	0.22	0.00	0.10	0.0	5.0
	03/27/23		--	10.35	0.00	0.00	500.51	0.34	1.00	1.10	5.5	10.5
	01/18/23		--	10.91	0.00	0.00	499.95	-0.56	0.00	0.00	0.0	10.5
	02/23/23 ⁽⁵⁾		--	10.69	0.00	0.00	500.17	0.22	0.00	0.00	0.0	10.5
	03/27/23 ⁽⁵⁾		--	10.35	0.00	0.00	500.51	0.34	0.00	0.00	0.0	10.5
	04/06/23 ⁽⁵⁾		10.10	10.11	0.01	0.01	500.76	0.25	0.20	1.30	1.3	11.8
	05/09/23		--	10.53	0.00	0.00	500.33	-0.43	0.00	1.30	3.0	14.8
	06/29/23		--	11.82	0.00	0.00	499.04	-1.29	0.00	1.30	0.0	14.8
	07/27/23		--	12.11	0.00	0.00	498.75	-0.29	0.00	1.30	0.25	15.1
	08/10/23		12.32	12.33	0.01	0.01	498.54	-0.21	0.10	1.40	2.4	17.5
	09/19/23		12.30	12.45	0.15	0.14	498.52	-0.01	0.15	1.55	3.3	20.7
	10/25/23		11.38	11.45	0.07	-0.08	499.46	0.94	0.10	1.65	3.0	23.7
	11/21/23		11.23	11.25	0.02	-0.05	499.63	0.16	0.05	1.70	1.05	24.8
	12/13/23		--	10.18	Sheen	-0.02	500.68	1.05	0.01	1.71	1.75	26.5
	01/30/24		--	9.66	0.00	0.00	501.20	0.52	0.00	1.71	1.75	28.3
	02/28/24		--	10.37	Sheen	0.00	500.49	-0.71	0.00	1.71	2.25	30.5
	03/28/24		10.43	10.44	0.01	0.01	500.43	-0.06	0.01	1.72	2.00	32.5
	04/16/24 ⁽⁴⁾		--	10.74	Sheen	-0.01	500.12	-0.31	0.00	1.72	2.60	35.1
	05/15/24 ⁽⁴⁾		--	10.56	0.00	0.00	500.30	0.18	0.00	1.72	2.70	37.8
06/12/24 ⁽⁴⁾	11.51	11.54	0.03	0.03	499.34	-0.96	0.05	1.77	1.95	39.8		
07/11/24 ⁽⁴⁾	--	11.79	Sheen	-0.03	499.07	-0.27	0.10	1.87	1.70	41.5		
08/21/24	--	11.78	0.00	0.00	499.08	0.01	0.26	2.13	0.00	0.0		
09/24/24	--	11.89	Sheen	0.00	498.97	-0.11	0.00	2.13	0.00	0.0		
EW-2	11/19/20 ⁽⁴⁾	510.90	11.20	11.68	0.48	--	499.59	--	32.5	32.50	617.5 ⁽⁴⁾	617.5
	01/13/21 ⁽³⁾		10.22	12.05	1.83	1.35	500.25	0.66	5.00	37.50	45.0	662.5
	01/27/21 ⁽⁴⁾		10.50	12.35	1.85	0.02	499.97	-0.28	2.60	40.10	2.4	664.9
	02/03/21 ⁽³⁾		10.77	11.37	0.60	-1.25	499.99	0.02	23.00	63.10	209.0	873.9
	02/25/21 ⁽⁵⁾		10.74	11.10	0.36	-0.24	500.08	0.09	0.50	63.60	0.0	873.9
	03/30/21		11.20	11.28	0.08	-0.28	499.68	-0.39	0.03	63.63	0.0	873.9
	04/20/21		11.74	11.93	0.19	0.11	499.12	-0.57	0.00	63.63	0.0	873.9
	05/20/21 ⁽⁷⁾		11.95	12.20	0.25	0.06	498.89	-0.22	15.00	78.63	135.0	1,008.9
	06/08/21 ⁽⁴⁾		11.90	12.00	0.10	-0.15	498.98	0.09	0.25	78.88	4.0	1,012.9
	06/23/21 ⁽⁴⁾		11.88	12.07	0.19	0.09	498.98	0.00	0.40	79.28	4.2	1,017.1
	07/08/21 ⁽⁹⁾		12.12	12.17	0.05	-0.14	498.77	-0.21	0.26	79.54	3.2	1,020.3
	07/22/21		--	12.28	0.00	-0.05	498.62	-0.15	0.00	79.54	0.0	1,020.3
	08/05/21 ⁽⁴⁾		12.32	12.33	0.01	0.01	498.58	-0.04	0.10	79.64	0.4	1,020.7
	08/18/21 ⁽⁴⁾		12.48	12.50	0.02	0.01	498.42	-0.16	0.10	79.74	1.0	1,021.7
	09/01/21 ⁽⁴⁾		12.40	12.42	0.02	0.00	498.50	0.08	0.10	79.84	1.0	1,022.7
	09/22/21 ⁽⁴⁾		11.84	11.87	0.03	0.01	499.05	0.56	0.20	80.04	3.0	1,025.7
	10/06/21		11.55	11.59	0.04	0.01	499.34	0.29	0.25	80.29	2.0	1,027.7
	10/20/21 ^(4,5)		11.52	11.63	0.11	0.07	499.35	0.01	0.25	80.54	3.0	1,030.7
	11/03/21		--	11.19	0.00	-0.11	499.71	0.36	0.00	80.54	0.0	1,030.7
	11/17/21		--	11.02	0.00	0.00	499.88	0.17	0.00	80.54	0.0	1,030.7
	12/08/21 ⁽⁷⁾		10.95	10.97	0.02	0.02	499.95	0.07	1.30	81.84	128.7	1,159.4
	12/22/21		10.20	10.22	0.02	0.00	500.70	0.75	0.13	81.97	0.0	1,159.4
	01/11/22		10.00	11.96	1.96	1.94	500.44	-0.26	6.60	88.57	2.4	1,161.8
01/26/22 ⁽⁷⁾	10.95	12.00	1.05	-0.91	499.70	-0.74	11.60	100.17	20.0	1,181.8		
02/07/22	9.98	11.99	2.01	0.96	500.45	0.74	1.59	101.76	0.0	1,181.8		
Well Decommissioned on 02/08/22												



Table 1
United Pacific #5468
Summary of LPH Removal
Springfield, Oregon
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Well ID	Date Measured	TOC Elevation (ft amsl)	Depth to LPH (ft btoc)	Depth to Water (ft btoc)	LPH Thickness (ft)	Thickness Change (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)	Estimated LPH Removed (gal)	Cumulative LPH Removed (gal)	Estimated Water Removed (gal)	Cumulative Water Removed (gal)
EW-2R	10/12/22 ⁽⁴⁾	510.91	12.32	12.34	0.02	--	498.59	--	0.20	0.20	3.0	3.0
	11/14/22		--	10.94	0.00	-0.02	499.97	1.38	0.00	0.20	0.0	3.0
	12/19/22		11.53	11.54	0.01	0.01	499.38	-0.59	0.50	0.70	6.0	9.0
	01/18/23 ⁽⁴⁾		11.11	11.12	0.01	0.00	499.80	0.42	0.13	0.83	4.0	13.0
	02/28/23		--	10.93	0.00	0.00	499.98	0.18	0.00	0.83	0.0	13.0
	03/27/23		--	10.53	0.00	0.00	500.38	0.40	0.00	0.83	0.0	13.0
	04/06/23		--	10.32	0.00	0.00	500.59	0.21	0.00	0.83	0.0	13.0
	05/09/23		--	10.59	0.00	0.00	500.32	-0.27	0.00	0.83	0.0	13.0
	06/29/23		--	12.17	0.00	0.00	498.74	-1.58	0.00	0.83	0.0	13.0
	07/27/23		--	12.74	0.00	0.00	498.17	-0.57	0.00	0.83	0.0	13.0
	08/10/23		--	12.44	0.00	0.00	498.47	0.30	0.00	0.83	0.0	13.0
	09/19/23		--	12.46	0.00	0.00	498.45	-0.02	0.00	0.83	0.0	13.0
	10/25/23		--	11.60	0.00	0.00	499.31	0.86	0.00	0.83	0.1	13.1
	11/21/23		--	11.37	0.00	0.00	499.54	0.23	0.00	0.83	0.2	13.3
	12/13/23		--	10.44	0.00	0.00	500.47	0.93	0.00	0.83	0.0	13.3
	01/30/24		--	9.96	0.00	0.00	500.95	0.48	0.00	0.83	0.0	13.3
	02/27/24		--	10.63	0.00	0.00	500.28	-0.67	0.00	0.83	0.0	13.3
	03/28/24		--	10.65	0.00	0.00	500.26	-0.02	0.00	0.83	0.0	13.3
	04/16/24		--	10.89	0.00	0.00	500.02	-0.24	0.00	0.83	0.0	13.3
	05/14/24		--	10.76	0.00	0.00	500.15	0.13	0.00	0.83	0.0	13.3
	06/12/24		--	11.66	0.00	0.00	499.25	-0.90	0.00	0.83	0.0	13.3
	07/11/24		--	11.87	0.00	0.00	499.04	-0.21	0.00	0.83	0.0	13.3
	08/21/24		--	11.82	0.00	0.00	499.09	0.05	0.00	0.83	0.0	13.3
	09/24/24		--	11.22	0.00	0.00	499.69	0.60	0.00	0.83	0.0	13.3
EW-3	11/19/20 ⁽⁴⁾	511.63	12.02	12.45	0.43	--	499.51	--	32.5	32.50	617.5 ⁽⁴⁾	617.5
	01/13/21 ⁽⁴⁾		11.13	11.29	0.16	-0.27	500.46	0.95	5.00	37.50	45.0	662.5
	01/27/21 ⁽⁴⁾		11.36	11.68	0.32	0.16	500.19	-0.27	0.60	38.10	3.9	666.4
	02/03/21 ⁽⁴⁾		12.79	12.89	0.10	-0.22	498.82	-1.38	16.00	54.10	149.0	815.4
	02/25/21 ⁽⁴⁾		ND	11.39	0.00	-0.10	500.24	1.42	0.00	54.10	0.0	815.4
	03/30/21		11.68	11.90	0.22	0.22	499.90	-0.34	0.07	54.17	1.5	816.9
	04/20/21 ⁽⁴⁾		12.25	12.64	0.39	0.17	499.29	-0.61	0.00	54.17	0.0	816.9
	05/20/21 ⁽⁷⁾		12.42	12.84	0.42	0.03	499.11	-0.18	15.00	69.17	135.0	951.9
	06/08/21		--	12.44	0.00	-0.42	499.19	0.08	0.00	69.17	0.0	951.9
	06/23/21 ⁽⁴⁾		12.40	12.41	0.01	0.01	499.23	0.04	0.07	69.24	0.5	952.4
	07/8/21 ⁽⁴⁾		12.62	12.71	0.09	0.08	498.99	-0.24	0.40	69.64	0.8	953.2
	07/22/21 ⁽⁴⁾		12.80	12.94	0.14	0.05	498.80	-0.19	1.00	70.64	4.0	957.2
	08/05/21 ⁽⁴⁾		12.86	13.07	0.21	0.07	498.72	-0.08	0.50	71.14	2.0	959.2
	08/18/21 ⁽⁴⁾		13.01	13.20	0.19	-0.02	498.58	-0.15	1.50	72.64	2.0	961.2
	09/01/21 ⁽⁴⁾		13.00	13.14	0.14	-0.05	498.60	0.02	0.25	72.89	1.5	962.7
	09/22/21 ⁽⁴⁾		12.36	12.45	0.09	-0.05	499.25	0.65	0.40	73.29	4.0	966.7
	10/06/21		--	12.16	0.00	-0.09	499.47	0.22	0.00	73.29	0.0	966.7
	10/20/21 ^(4,5)		12.08	12.12	0.00	0.00	499.51	0.04	0.10	73.39	3.0	969.7
	11/03/21		--	11.75	0.00	0.00	499.88	0.37	0.00	73.39	0.0	969.7
	11/17/21		--	11.55	0.00	0.00	500.08	0.20	0.00	73.39	0.0	969.7
	12/08/21		--	11.44	0.00	0.00	500.19	0.11	0.00	73.39	0.0	969.7
	12/22/21		10.76	10.77	0.01	0.01	500.87	0.68	0.13	73.52	0.3	970.0
	01/11/22		11.43	11.44	0.01	0.00	500.20	-0.67	0.16	73.68	2.9	972.9
	01/26/22		--	11.73	0.00	-0.01	499.90	-0.30	0.00	73.68	0.0	972.9
02/07/22	11.39	11.51	0.12	0.12	500.21	0.31	0.80	74.48	0.8	973.7		
Well Decommissioned on 02/07/22												
EW-4	10/12/22 ⁽⁴⁾	511.52	12.89	12.90	0.01	--	498.63	--	0.10	0.10	2.0	2.0
	11/14/22		--	10.97	0.00	-0.01	500.55	1.92	0.00	0.10	0.0	2.0
	12/19/22 ^(4,5)		12.08	12.30	0.22	0.22	499.39	-1.16	1.00	1.10	8.0	10.0
	01/18/23 ⁽⁴⁾		11.67	11.68	0.01	-0.21	499.85	0.46	0.50	1.60	4.5	14.5
	02/28/23 ⁽⁴⁾		--	11.60	0.00	-0.01	499.92	0.07	0.00	1.60	1.5	16.0
	03/27/23		--	11.20	0.00	0.00	500.32	0.40	1.60	3.20	4.9	20.9
	04/06/23		--	11.00	0.00	0.00	500.52	0.20	0.10	3.30	1.4	22.3
	05/09/23		10.60	10.62	0.02	0.02	500.92	0.40	0.30	3.60	3.0	25.3
	06/29/23		--	12.72	0.00	-0.02	498.80	-2.12	0.00	3.60	0.0	25.3
	07/27/23		--	12.81	0.00	0.00	498.71	-0.09	0.00	3.60	0.0	25.3
	08/10/23		--	13.04	0.00	0.00	498.48	-0.23	0.00	3.60	0.0	25.3
	09/19/23		--	13.07	0.00	0.00	498.45	-0.03	0.00	3.60	0.0	25.3
	10/25/23		--	12.19	0.00	0.00	499.33	0.88	0.00	3.60	0.0	25.3
	11/21/23		--	12.01	0.00	0.00	499.51	0.18	0.00	3.60	0.0	25.3
	12/13/23		--	9.29	0.00	0.00	502.23	2.72	0.00	3.60	0.0	25.3
	01/30/24		--	10.51	0.00	0.00	501.01	-1.22	0.00	3.60	0.0	25.3
	02/27/24		--	11.19	0.00	0.00	500.33	-0.68	0.00	3.60	0.5	25.8
	03/28/24		--	11.20	0.00	0.00	500.32	-0.01	0.00	3.60	0.0	25.8
	04/16/24		--	11.45	0.00	0.00	500.07	-0.25	0.00	3.60	0.0	25.8
	05/14/24		--	11.34	0.00	0.00	500.18	0.11	0.00	3.60	0.0	25.8
	06/12/24		--	12.20	0.00	0.00	499.32	-0.86	0.00	3.60	0.0	25.8
	07/11/24		--	12.43	0.00	0.00	499.09	-0.23	0.00	3.60	0.0	25.8
	08/21/24		--	12.42	0.00	0.00	499.10	0.01	0.00	3.60	0.0	25.8
	09/24/24		--	12.30	0.00	0.00	499.22	0.12	0.00	3.60	0.0	25.8
MW-1	03/30/21	512.70	12.78	12.79	0.01	--	499.92	--	0.00	0.00	0.0	0.0
	04/20/21		13.40	13.59	0.19	0.18	499.26	-0.66	0.00	0.00	0.0	0.0
	05/20/21 ⁽⁷⁾		13.61	13.95	0.34	0.15	499.01	-0.25	15.00	15.00	135.0	135.0
	06/08/21 ⁽⁴⁾		13.59	13.86	0.27	-0.07	499.05	0.04	2.00	17.00	2.0	137.0
	06/23/21 ⁽⁴⁾		13.55	13.83	0.28	0.01	499.08	0.04	0.40	17.40	2.1	139.1
	07/8/21 ^(4,5)		13.76	14.15	0.39	0.11	498.85	-0.24	2.10	19.50	0.8	139.9
	07/22/21		13.95	14.22	0.27	-0.12	498.69	-0.16	2.50	22.00	3.0	142.9
	08/05/21		14.02	14.27	0.25	-0.02	498.62	-0.07	2.00	24.00	2.0	144.9
	08/18/21		14.17	14.25	0.08	-0.17	498.51	-0.11	2.00	26.00	1.5	146.4
	09/01/21 ⁽⁹⁾		14.15	14.16	0.01	-0.07	498.55	0.04	0.10	26.10	1.0	147.4
09/22/21 ⁽⁴⁾	13.56	13.57	0.01	0.00	499.14	0.59	0.10	26.20	1.0	148.4		



Table 1
United Pacific #5468
Summary of LPH Removal
Springfield, Oregon
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Well ID	Date Measured	TOC Elevation (ft amsl)	Depth to LPH (ft btoc)	Depth to Water (ft btoc)	LPH Thickness (ft)	Thickness Change (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)	Estimated LPH Removed (gal)	Cumulative LPH Removed (gal)	Estimated Water Removed (gal)	Cumulative Water Removed (gal)		
MW-1 Cont.	10/06/21	512.70	--	13.18	0.00	-0.01	499.52	0.38	0.00	26.20	0.0	148.4		
	10/20/21		--	13.23	0.00	0.00	499.47	-0.05	0.00	26.20	0.0	148.4		
	11/03/21		--	12.80	0.00	0.00	499.90	0.43	0.00	26.20	0.0	148.4		
	11/17/21		--	12.39	0.00	0.00	500.31	0.41	0.00	26.20	0.0	148.4		
	12/08/21		--	12.47	0.00	0.00	500.23	-0.08	0.00	26.20	0.0	148.4		
	12/22/21		--	11.61	0.00	0.00	501.09	0.86	0.00	26.20	0.0	148.4		
	01/11/22		--	11.82	0.00	0.00	500.88	-0.21	0.00	26.20	0.0	148.4		
	01/26/22		--	12.56	0.00	0.00	500.14	-0.74	0.00	26.20	0.0	148.4		
	02/07/22		--	11.88	0.00	0.00	500.82	0.68	0.00	26.20	0.0	148.4		
	03/23/22		12.97	13.00	0.03	0.03	499.72	-1.10	0.00	26.20	0.0	148.4		
	06/28/22 ^(4,5)		13.14	13.16	0.02	-0.01	499.56	-0.17	0.10	26.30	2.0	150.4		
	08/11/22		--	13.75	0.00+	-0.02	498.95	-0.61	0.11	26.41	0.5	150.9		
	08/25/22 ⁽⁴⁾		13.97	14.00	0.03	0.03	498.72	-0.23	0.30	26.71	2.0	152.9		
	09/08/22 ⁽⁴⁾		13.88	13.90	0.02	-0.01	498.82	0.09	0.50	27.21	3.25	156.2		
	10/12/22 ⁽⁴⁾		13.07	13.11	0.04	0.02	499.62	0.81	0.50	27.71	3.0	159.2		
	11/14/22		12.37	12.39	0.02	-0.02	500.33	0.70	0.50	28.21	3.0	162.2		
	12/19/22 ⁽⁹⁾		--	13.17	0.00	-0.02	499.53	-0.80	0.00	28.21	1.0	163.2		
	01/18/23		--	12.68	0.00	0.00	500.02	0.49	0.00	28.21	0.0	163.2		
	02/28/23		--	11.90	0.00	0.00	500.80	0.78	0.00	28.21	0.0	163.2		
	03/27/23		--	11.59	0.00	0.00	501.11	0.31	0.00	28.21	0.0	163.2		
	04/06/23		--	11.64	0.00	0.00	501.06	-0.05	0.00	28.21	0.0	163.2		
	05/09/23		--	12.69	0.00	0.00	500.01	-1.05	0.00	28.21	0.0	163.2		
	06/29/23		--	12.75	0.00	0.00	499.95	-0.06	0.00	28.21	0.0	163.2		
	07/27/23		--	14.04	Sheen	0.00	498.66	-1.29	0.00	28.21	0.25	163.4		
	08/10/23		14.18	14.25	0.07	0.00	498.50	-0.16	0.10	28.31	0.90	164.3		
	09/19/23		14.23	14.25	0.02	0.00	498.47	-0.04	0.05	28.36	0.60	164.9		
	10/25/23		--	13.10	0.00	-0.02	499.60	1.13	0.00	28.36	0.10	165.0		
	11/21/23		--	13.01	0.00	0.00	499.69	0.09	0.00	28.36	0.20	165.2		
	12/13/23		--	11.78	0.00	0.00	500.92	1.23	0.00	28.36	0.00	165.2		
	01/30/24		--	11.47	0.00	0.00	501.23	0.31	0.00	28.36	0.00	165.2		
	02/27/24		--	12.18	0.00	0.00	500.52	-0.71	0.00	28.36	0.00	165.2		
	03/28/24		--	12.07	0.00	0.00	500.63	0.11	0.00	28.36	0.00	165.2		
	04/16/24		--	12.47	0.00	0.00	500.23	-0.40	0.00	28.36	0.00	165.2		
	05/14/24		--	12.56	0.00	0.00	500.14	-0.09	0.00	28.36	0.00	165.2		
	06/12/24 ⁽⁴⁾		13.29	13.30	0.01	0.01	499.41	-0.73	Sheen	28.36	0.5	165.7		
	07/11/24		--	13.61	0.00	-0.01	499.09	-0.32	0.00	28.36	0.00	165.7		
	08/21/24		--	13.62	0.00	0.00	499.08	-0.01	0.00	28.36	0.00	165.7		
	09/24/24		--	13.45	0.00	0.00	499.25	0.17	0.00	28.36	0.00	165.7		
	MW-2		03/30/21	511.29	11.42	11.93	0.51	--	499.75	--	0.00	0.00	0.0	0.0
			04/20/21 ^(4,5)		11.88	12.60	0.72	0.21	499.24	-0.51	3.25	3.25	5.0	5.0
05/20/21 ⁽⁷⁾		--	12.30		0.00	-0.72	498.99	-0.25	15.53	18.78	135.0	140.0		
06/08/21		--	12.27		0.00	0.00	499.02	0.03	0.00	18.78	0.0	140.0		
06/23/21 ⁽⁴⁾		12.15	12.16		0.01	0.01	499.14	0.12	0.07	18.85	0.5	140.5		
07/08/21 ⁽⁴⁾		12.36	12.49		0.13	0.12	498.90	-0.24	0.80	19.65	1.6	142.1		
07/22/21 ⁽⁴⁾		12.50	12.67		0.17	0.04	498.75	-0.15	1.50	21.15	3.0	145.1		
08/05/21		12.54	12.76		0.22	0.05	498.70	-0.05	1.00	22.15	3.0	148.1		
08/18/21		12.70	12.95		0.25	0.03	498.53	-0.17	0.75	22.90	2.0	150.1		
09/01/21 ^(4,5)		12.64	12.85		0.21	-0.04	498.60	0.07	0.50	23.40	2.0	152.1		
09/22/21		12.09	12.16		0.07	-0.14	499.18	0.58	0.75	24.15	3.0	155.1		
10/06/21		--	11.84		0.00	-0.07	499.45	0.27	0.00	24.15	0.0	155.1		
10/20/21		--	11.80		0.00	0.00	499.49	0.04	0.00	24.15	0.0	155.1		
11/03/21		--	11.51		0.00	0.00	499.78	0.29	0.00	24.15	0.0	155.1		
11/17/21		--	11.17		0.00	0.00	500.12	0.34	0.00	24.15	0.0	155.1		
12/08/21		--	11.12		0.00	0.00	500.17	0.05	0.00	24.15	0.0	155.1		
12/22/21		10.50	10.51		0.01	0.01	500.79	0.62	0.07	24.22	0.0	155.1		
01/11/22		--	11.40		0.00	-0.01	499.89	-0.90	0.00	24.22	0.3	155.4		
01/26/22		--	11.49		0.00	0.00	499.80	-0.09	0.00	24.22	0.0	155.4		
02/07/22		--	11.47		0.00	0.00	499.82	0.02	0.13	24.35	0.3	155.7		
03/23/22		11.75	11.76		0.01	0.01	499.54	-0.28	0.00	24.35	0.0	155.7		
06/28/22		12.12	12.14		0.02	0.01	499.17	-0.37	0.10	24.45	2.0	157.7		
08/11/22 ⁽⁴⁾		12.40	12.42		0.02	0.00	498.89	-0.28	0.23	24.68	3.2	160.9		
08/25/22 ⁽⁹⁾		--	12.70		0.00	-0.02	498.59	-0.30	0.20	24.88	0.5	161.4		
09/08/22 ^(4,5)		12.55	12.56		0.01	0.01	498.74	0.15	0.10	24.98	3.0	164.4		
10/12/22 ⁽⁴⁾		12.77	12.84		0.07	0.06	498.50	-0.23	0.25	25.23	3.0	167.4		
11/14/22		10.93	10.95		0.02	-0.05	500.36	1.85	0.25	25.48	2.5	169.9		
12/19/22		--	11.95		0.00	-0.02	499.34	-1.02	0.13	25.61	0.5	170.4		
01/18/23		--	11.55		0.00	0.00	499.74	0.40	0.00	25.61	0.5	170.9		
02/28/23		11.33	11.34		0.01	0.01	499.96	0.22	0.10	25.71	1.3	172.1		
03/27/23		--	11.02		0.00	-0.01	500.27	0.31	0.10	25.81	1.4	173.5		
04/06/23		--	10.81		0.00	0.00	500.48	0.21	0.00	25.81	0.5	174.0		
05/09/23		--	11.75		0.00	0.00	499.54	-0.94	0.00	25.81	0.5	174.5		
06/29/23		--	12.33		0.00	0.00	498.96	-0.58	0.00	25.81	0.5	175.0		
07/27/23		--	12.71		0.00	0.00	498.58	-0.38	0.00	25.81	0.5	175.5		
08/10/23		12.86	12.91		0.05	0.00	498.42	-0.16	0.05	25.86	0.45	176.0		
09/19/23		12.98	13.04		0.06	0.00	498.30	-0.12	0.05	25.91	1.20	177.2		
10/25/23		--	12.07		0.00	-0.06	499.22	0.92	0.00	25.91	0.00	177.2		
11/21/23		--	11.85		0.00	0.00	499.44	0.22	0.00	25.91	0.00	177.2		
12/13/23		--	10.84		0.00	0.00	500.45	1.01	0.00	25.91	0.00	177.2		
01/30/24	--	10.49	0.00	0.00	500.80	0.35	0.00	25.91	0.00	177.2				
02/27/24	--	11.12	0.00	0.00	500.17	-0.63	0.00	25.91	0.00	177.2				
03/27/24	--	11.23	0.00	0.00	500.06	-0.11	0.00	25.91	0.00	177.2				
04/16/24	--	11.34	0.00	0.00	499.95	-0.11	0.00	25.91	0.00	177.2				
05/14/24	--	11.45	0.00	0.00	499.84	-0.11	0.00	25.91	0.00	177.2				
06/12/24	--	11.98	0.00	0.00	499.31	-0.53	0.00	25.91	0.00	177.2				
07/11/24	--	12.48	0.00	0.00	498.81	-0.50	0.00	25.91	0.00	177.2				
08/21/24	--	12.29	0.00	0.00	499.00	0.19	0.00	25.91	0.00	177.2				
09/24/24	--	12.11	0.00	0.00	499.18	0.18	0.00	25.91	0.00	177.2				



Table 1
United Pacific #5468
Summary of LPH Removal
Springfield, Oregon
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Well ID	Date Measured	TOC Elevation (ft amsl)	Depth to LPH (ft btoc)	Depth to Water (ft btoc)	LPH Thickness (ft)	Thickness Change (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)	Estimated LPH Removed (gal)	Cumulative LPH Removed (gal)	Estimated Water Removed (gal)	Cumulative Water Removed (gal)	
MW-5	03/30/21	509.10	--	9.56	0.00	--	499.54	--	0.00	0.00	0.0	0.0	
	04/20/21		--	10.13	0.00	0.00	498.97	-0.57	0.00	0.00	0.0	0.0	
	05/20/21		--	10.32	0.00	0.00	498.78	-0.19	0.00	0.00	0.0	0.0	
	06/08/21		--	10.31	0.00	0.00	498.79	0.01	0.00	0.00	0.0	0.0	
	06/23/21		--	10.29	0.00	0.00	498.81	0.02	0.00	0.00	0.0	0.0	
	07/08/21		--	10.53	0.00	0.00	498.57	-0.24	0.00	0.00	0.0	0.0	
	07/22/21		--	10.69	0.00	0.00	498.41	-0.16	0.00	0.00	0.0	0.0	
	08/05/21 ⁽⁴⁾			10.74	10.76	0.02	0.02	498.36	-0.05	0.10	0.10	0.5	0.5
	08/18/21 ⁽⁴⁾			10.87	11.10	0.23	0.21	498.18	-0.18	0.75	0.85	2.5	3.0
	09/01/21 ⁽⁴⁾			10.76	10.77	0.01	-0.22	498.34	0.16	0.10	0.95	1.0	4.0
	09/22/21		--	--	10.27	0.00	-0.01	498.83	0.49	0.00	0.95	0.9	4.9
	10/06/21		--	--	9.93	0.00	0.00	499.17	0.34	0.00	0.95	0.0	4.9
	10/20/21		--	--	9.95	0.00	0.00	499.15	-0.02	0.00	0.95	0.0	4.9
	11/03/21		--	--	9.56	0.00	0.00	499.54	0.39	0.00	0.95	0.0	4.9
	11/17/21		--	--	9.37	0.00	0.00	499.73	0.19	0.00	0.95	0.0	4.9
	12/08/21		--	--	9.25	0.00	0.00	499.85	0.12	0.00	0.95	0.0	4.9
	12/22/21		--	--	8.45	0.00	0.00	500.65	0.80	0.00	0.95	0.0	4.9
	01/11/22		--	--	8.81	0.00	0.00	500.29	-0.36	0.00	0.95	0.0	4.9
	01/26/22		--	--	9.14	0.00	0.00	499.96	-0.33	0.00	0.95	0.0	4.9
	02/07/22		--	--	8.84	0.00	0.00	500.26	0.30	0.00	0.95	0.0	4.9
	03/23/22		--	--	9.50	0.00	0.00	499.60	-0.66	0.00	0.95	0.0	4.9
	06/29/22		--	--	10.02	0.00	0.00	499.08	-0.52	0.00	0.95	2.9	7.8
	08/11/22 ^(6,3)			10.41	10.50	0.09	0.09	498.67	-0.41	0.10	1.05	2.0	9.8
	08/25/22			10.63	10.73	0.10	0.01	498.45	-0.22	0.75	1.80	0.75	10.6
	09/08/22 ⁽⁴⁾			10.57	10.58	0.01	-0.09	498.53	0.08	0.30	2.10	3.5	14.1
	10/12/22 ⁽⁴⁾			11.68	11.75	0.07	0.06	497.40	-1.12	1.00	3.10	5.0	19.1
	11/14/22		--	--	9.34	0.00	-0.07	499.76	2.36	0.50	3.60	0.0	19.1
	12/19/22 ⁽⁴⁾		--	--	9.82	0.00	0.00	499.28	-0.48	0.10	3.70	2.0	21.1
	01/18/23		--	--	9.44	0.00	0.00	499.66	0.38	0.25	3.95	1.0	22.1
	02/28/23 ⁽⁴⁾			9.22	9.23	0.01	0.01	499.88	0.22	5.90	9.85	0.6	22.7
	03/27/23		--	--	9.12	0.00	-0.01	499.98	0.10	0.00	9.85	1.0	23.7
	04/06/23		--	--	8.66	0.00	0.00	500.44	0.46	0.13	9.98	1.5	25.2
	05/09/23		--	--	9.55	0.00	0.00	499.55	-0.89	0.10	10.08	1.0	26.2
	06/29/23			10.50	10.56	0.06	0.06	498.59	-0.96	0.79	10.87	0.3	26.4
	07/27/23		--	--	11.89	0.00	-0.06	497.21	-1.38	0.00	10.87	0.0	26.4
	08/10/23		--	--	10.90	0.07	0.07	498.18	0.97	0.05	10.92	0.95	27.4
	09/19/23		--	--	11.98	Sheen	-0.07	497.12	-1.06	0.00	10.92	0.35	27.7
	10/25/23			9.93	9.94	0.01	0.01	499.17	2.05	0.10	11.02	1.65	29.4
	11/21/23		--	--	11.13	0.00	-0.01	497.97	-1.20	0.65	11.67	0.10	29.5
	12/13/23			8.78	8.79	0.01	0.01	500.32	2.35	0.05	11.72	1.70	31.2
	01/30/24		--	--	8.11	0.00	-0.01	500.99	0.67	0.00	11.72	1.75	32.9
	02/28/24		--	--	8.93	Sheen	0.00	500.17	-0.82	0.00	11.72	2.50	35.4
	03/28/24		--	--	9.00	Sheen	0.00	500.10	-0.07	0.01	11.73	2.1	37.5
	04/16/24		--	--	9.31	Sheen	0.00	499.79	-0.31	0.00	11.73	2.40	39.9
	05/15/24		--	--	9.12	Sheen	0.00	499.98	0.19	0.00	11.73	2.75	42.7
	06/12/24		--	--	10.04	Sheen	0.00	499.06	-0.92	Sheen	11.73	3.5	46.2
	07/11/24		--	--	10.43	0.00	0.00	498.67	-0.39	0.00	11.73	2.00	48.2
	08/21/24		--	--	10.33	0.00	0.00	498.77	0.10	0.26	11.99	0.00	48.2
09/24/24		--	--	10.49	Sheen	0.00	498.61	-0.16	0.00	11.99	0.00	48.2	
MW-6	03/30/21 ^(6,3)	510.51	10.50	12.15	1.65	--	499.62	--	6.00	6.00	1.0	1.0	
	04/20/21 ⁽⁴⁾		11.31	12.04	0.73	-0.92	499.03	-0.59	4.00	10.00	6.0	7.0	
	05/20/21 ⁽⁷⁾		11.60	12.22	0.62	-0.11	498.76	-0.26	17.24	27.24	135.0	142.0	
	06/08/21 ⁽⁴⁾		11.70	11.72	0.02	-0.60	498.81	0.04	2.08	29.32	4.0	146.0	
	06/23/21 ⁽⁴⁾		11.60	11.62	0.02	0.00	498.91	0.10	1.65	30.97	0.5	146.5	
	07/08/21		--	--	11.91	0.00	-0.02	498.60	-0.31	2.10	33.07	2.1	148.6
	07/22/21 ⁽⁴⁾			11.92	12.18	0.26	0.26	498.53	-0.07	3.00	36.07	3.5	152.1
	08/05/21 ⁽⁴⁾			11.88	12.56	0.68	0.42	498.47	-0.06	3.50	39.57	3.5	155.6
	08/18/21 ⁽⁴⁾			11.95	12.75	0.80	0.12	498.37	-0.10	3.50	43.07	2.0	157.6
	09/1/21 ⁽⁴⁾			11.98	12.58	0.60	-0.20	498.39	0.02	3.25	46.32	1.0	158.6
	09/22/21 ⁽⁴⁾			11.47	11.88	0.41	-0.19	498.94	0.55	5.20	51.52	6.0	164.6
	10/06/21		--	--	11.04	0.00	-0.41	499.47	0.53	0.00	51.52	0.0	164.6
	10/20/21 ⁽⁴⁾			11.05	11.85	0.00	0.00	498.66	-0.81	3.50	55.02	4.0	168.6
	11/3/21 ⁽⁴⁾			10.88	10.90	0.02	0.02	499.63	0.97	1.45	56.47	0.7	169.3
	11/17/21		--	--	10.61	0.00	-0.02	499.90	0.27	0.13	56.60	0.0	169.3
	12/08/21		--	--	10.53	0.00	0.00	499.98	0.08	0.26	56.86	0.0	169.3
	12/22/21			9.91	9.92	0.01	0.01	500.60	0.62	0.13	56.99	0.5	169.8
	01/11/22 ⁽⁴⁾			10.08	10.13	0.05	0.04	500.42	-0.18	1.98	58.97	4.0	173.8
	01/26/22 ⁽⁴⁾			10.88	10.92	0.04	-0.01	499.62	-0.80	0.81	59.78	2.1	175.9
	02/07/22 ⁽⁴⁾			10.12	10.26	0.14	0.10	500.36	0.74	2.50	62.28	3.5	179.4
	03/23/22 ⁽⁴⁾			10.74	11.15	0.41	0.27	499.67	-0.68	1.84	64.12	2.1	181.5
	06/28/22 ⁽⁴⁾			11.17	11.86	0.69	0.28	499.18	-0.50	3.00	67.12	6.0	187.5
	08/11/22 ⁽⁴⁾			11.68	11.95	0.27	-0.42	498.77	-0.41	2.50	69.62	3.5	191.0
	08/25/22		--	--	12.12	0.00	-0.27	498.39	-0.38	1.00	70.62	0.0	191.0
	09/08/22 ⁽⁴⁾			11.85	11.92	0.07	0.07	498.64	0.25	2.50	73.12	3.5	194.5
	10/12/22 ⁽⁴⁾			11.99	12.12	0.13	0.06	498.49	-0.15	2.50	75.62	6.0	200.5
	11/24/22			10.55	10.71	0.16	0.03	499.92	1.43	1.25	76.87	3.0	203.5
	12/19/22			11.09	11.64	0.55	0.39	499.29	-0.63	3.00	79.87	3.5	207.0
	01/18/23 ⁽⁴⁾			10.73	10.75	0.02	-0.53	499.78	0.48	2.00	81.87	5.0	212.0
	02/28/23 ⁽⁴⁾			10.52	10.58	0.06	0.04	499.98	0.20	3.00	84.87	0.3	212.3
	03/27/23			10.27	10.34	0.07	0.01	500.22	0.25	1.20	86.07	6.0	218.3
	04/06/23			9.95	10.00	0.05	-0.02	500.55	0.32	1.00	87.07	7.5	225.8
	05/09/23 ⁽⁴⁾			11.18	11.29	0.11	0.06	499.30	-1.24	0.50	87.57	5.0	230.8
	06/29/23			11.78	11.89	0.11	0.00	498.70	-0.60	0.79	88.36	0.3	231.1
	07/27/23			--	12.11	Sheen	-0.11	498.40	-0.30	1.00	89.36	0.0	231.1
	08/10/23			12.28	12.45	0.17	0.17	498.19	-0.21	0.50	89.86	0.0	231.1



Table 1
United Pacific #5468
Summary of LPH Removal
Springfield, Oregon
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Well ID	Date Measured	TOC Elevation (ft amsl)	Depth to LPH (ft btoc)	Depth to Water (ft btoc)	LPH Thickness (ft)	Thickness Change (ft)	Groundwater Elevation ⁽¹⁾ (ft amsl)	Elevation Change (ft)	Estimated LPH Removed (gal)	Cumulative LPH Removed (gal)	Estimated Water Removed (gal)	Cumulative Water Removed (gal)	
MW-6 Cont.	09/19/23	510.51	12.26	12.30	0.04	-0.13	498.24	0.05	1.00	90.86	0.25	231.3	
	10/25/23		--	11.38	Sheen	-0.04	499.13	0.89	0.01	90.87	0.50	231.8	
	11/21/23		--	9.82	0.00	0.00	500.69	1.56	0.00	90.87	0.00	231.8	
	12/13/23		--	10.10	Sheen	0.00	500.41	-0.28	0.00	90.87	1.75	233.6	
	01/30/24		9.49	9.50	0.01	0.01	501.02	0.61	0.00	90.87	1.75	235.3	
	02/28/24		--	10.21	Sheen	-0.01	500.30	-0.72	0.05	90.92	2.75	238.1	
	03/28/24		10.30	10.31	0.01	0.01	500.21	-0.09	0.05	90.97	1.8	239.9	
	04/16/24		10.59	10.61	0.02	0.01	499.92	-0.29	0.01	90.98	2.75	242.6	
	05/15/24		--	10.46	0.00	-0.02	500.05	0.13	0.05	91.03	2.25	244.9	
	06/12/24		11.34	11.38	0.04	0.04	499.16	-0.89	0.1	91.13	1.4	246.3	
	07/11/24		--	11.68	Sheen	-0.04	498.83	-0.33	0.01	91.14	2.24	248.5	
	08/21/24		--	12.62	0.00	0.00	497.89	-0.94	0.26	91.40	0.00	248.5	
	09/24/24		--	12.78	Sheen	0.00	497.73	-0.16	0.00	91.40	0.00	248.5	
										EW-1 Cumulative	20.85		893.5
										EW-2 Cumulative	101.76		1,181.8
									EW-3 Cumulative	74.48		973.7	
									EW-4 Cumulative	3.60		25.8	
									EW-1R Cumulative	2.13		0.0	
									EW-2R Cumulative	0.83		13.3	
									MW-1 Cumulative	28.36		165.7	
									MW-2 Cumulative	25.91		177.2	
									MW-5 Cumulative	11.99		48.2	
									MW-6 Cumulative	91.40		248.5	
Cumulative Removed From Site Wells										361.30		3,727.7	
Notes:													
(1): groundwater elevation corrected for the presence of free-product using the following calculation: casing elevation minus depth to water plus the product thickness times its density (0.765).						†: LPH accumulation in skimmer							
(2): recorded value is gallons of LPH and water removed						amsl: above mean sea level							
(3): overpurgings conducted using a vacuum truck						btoc: below top of casing							
(4): LPH removal by manual bailing						btocf: below top of fill port							
(5): LPH removal using downhole skimmer initiated						ft: feet							
(6): LPH removal using peristaltic pump						gal: gallons							
(7): LPH removal using vacuum truck						LPH: liquid phase hydrocarbons							
(8): well sampled using low-flow purge methods						Sheen: LPH sheen observed							
(9): downhole skimmer removed						TOC: top of casing							
---: not detected / not applicable / not surveyed						TOFP: top of fill port							
*: thickness measurements made in reference to total depth of premium UST = 12.20 btocf													
**: water volume estimates based on Containment Solutions* 12,000 gallon fiberglass double wall UST volume chart													



Table 2
Summary of Groundwater Monitoring Data
United Pacific #5468
Springfield, Oregon
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WELL ID	WELL STATUS	SAMPLE DATE	ANALYTICAL PARAMETERS											WATER QUALITY PARAMETERS						MONITORING PARAMETERS				WELL ELEVATION			WELL					
			TPH-Ox (µg/L)	TPH-Dx (µg/L)	TPH-Gx (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Naph (µg/L)	EDB* (µg/L)	EDC (µg/L)	Lead (µg/L)	DO (mg/L) ⁽⁶⁾	ORP (mV)	Conductivity (µs/cm)	pH	Temp (°C)	Turbidity (NTU)	Fe ²⁺ (mg/L)	DTP (ft btoc)	DTW (ft btoc)	DTB (ft btoc)	PT (ft)	CASING (ft amsl)	GW (ft amsl)	GW Δ (ft amsl)	DIA (inches)	SCREEN (ft bgs)		
			NWTPH-Dx		NWTPH-Gx	EPA Method 8260D										EPA 7010																
MW-1	Active	09/24/24	--	--	12,000	60	240	170	1,100	<5.0	52	<0.010	<1.0	<5.0	0.35	-31.8	810	6.28	19.1	15.98	6.0	--	13.45	24.50	0.00	512.70	499.25	-0.16	4	5-25		
MW-2	Active	09/24/24	--	--	20,000	490	2,500	630	3,500	<5.0	91	<0.010	<1.0	<5.0	0.32	-46.7	457.9	6.78	19.6	7.68	6.0	--	12.11	25.07	0.00	511.29	499.18	-0.13	4	5-25		
MW-3	Active	09/24/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	<5.0	3.01	52.1	261.9	6.78	18.9	9.01	0.5	--	11.72	26.35	0.00	511.12	499.40	-0.05	4	5-25		
MW-4	Active	09/24/24	--	--	970	<1.0	<2.0	8.7	290	<5.0	11	<0.010	<1.0	<5.0	0.44	48.6	481.1	6.75	19.5	4.30	0.5	--	10.51	23.80	0.00	509.78	499.27	-0.13	4	5-25		
MW-5 ⁽¹⁾	Active	09/24/24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	10.49	--	0.00	509.10	498.61	-0.45	4	3.5-23.5		
MW-6 ⁽¹⁾	Active	09/24/24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	12.78	--	0.00	510.51	497.73	-1.43	4	5-25		
MW-7	Active	09/24/24	--	--	710	32	<2.0	17	68	<5.0	12	<0.010	<1.0	<5.0	0.38	-38.6	659	6.35	17.4	13.41	10.0	--	12.60	24.70	0.00	511.65	499.05	-0.13	4	5-25		
MW-8	Active	09/24/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	<5.0	2.40	94.1	393.8	6.38	19.8	2.50	0.5	--	11.91	18.11	0.00	509.75	497.84	-0.28	4	8-18		
MW-9	Active	09/24/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	<5.0	1.15	102.5	281.0	6.01	18.1	5.11	0.5	--	10.68	17.24	0.00	509.89	499.21	-0.07	4	7-17		
MW-10	Active	09/24/24	--	--	<100	3.0	<2.0	2.9	3.0	<5.0	<5.0	<0.010	<1.0	<5.0	1.70	111.8	509	6.09	18.7	4.58	0.0	--	12.32	17.90	0.00	511.13	498.81	-0.11	4	7-17		
MW-11	Active	09/24/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	<5.0	1.45	-4.8	358.6	6.59	19.4	50.30	10.0	--	12.11	20.02	0.00	511.69	499.58	-0.31	2	10-20		
EW-1R ⁽¹⁾	Active	09/24/24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	11.89	--	0.00	510.86	498.97	-0.37	4	13-23		
EW-2R	Active	09/24/24	--	--	13,000	300	2,300	330	2,100	<5.0	53	<0.010	<1.0	<5.0	0.31	-79.9	5.50	7.05	19.4	4.10	8.0	--	11.22	22.79	0.00	510.91	499.69	0.44	4	13-23		
EW-4	Active	09/24/24	--	--	20,000	960	2,500	380	3,400	<5.0	96	<0.010	<1.0	<5.0	0.30	-70.1	540	6.92	19.5	5.35	4.0	--	12.30	22.90	0.00	510.67	498.37	-0.10	4	13-23		
NW Obs.	Observation	09/24/24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12.32	16.09	0.00	--	--	--	4	5-15		
NE Obs.	Observation	09/24/24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12.38	14.80	0.00	--	--	--	4	5-15		
SE Obs.	Observation	09/24/24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12.09	14.82	0.00	--	--	--	4	5-15		
SW Obs.	Observation	09/24/24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11.35	13.41	0.00	--	--	--	4	5-15		
RBC: Ingestion/Inhalation from Tapwater ⁽²⁾			430	430	450	2.1	6,300	6.4	830	68	0.72	0.034	0.78	15	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	
RBC: Volatilization to Outdoor Air ⁽³⁾			>S	>S	>S	14,000	>S	43,000	>S	1,500,000	16,000	790	9,000	nv	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	
RBC: Volatilization to Indoor Air ⁽⁴⁾			1,700	1,700	520	12/650	150,000/160,000	31/420,000	3,300/200,000	3,200/1,600,000	50/83,000	1.5/--	18/--	--	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
RBC: Groundwater in Excavations ⁽⁵⁾			>S	>S	14,000	1,800	220,000	4,500	23,000	63,000	500	27	630	>S	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na

Notes:

Results in **BOLD** indicate detections that exceed the ODEQ Risk-Based Concentrations (RBCs) for groundwater
(1): sample not collected due to liquid-phase hydrocarbons (LPH; free-product) present in well; groundwater elevation corrected for the presence of LPH using the following calculation: TOC elevation minus DTW plus the product thickness times its density (0.765)
(2): RBC for Groundwater - Ingestion and Inhalation from Tapwater, occupational receptor scenario (see ODEQ Table of RBCs - revised May 2018 amended June 2023)
(3): RBC for Groundwater - Volatilization to Outdoor Air, occupational receptor scenario (see ODEQ Table of RBCs - revised May 2018 amended June 2023)
(4): RBC for Groundwater - Volatilization to Indoor Air, Commercial scenario; Chronic/Acute screening values (see OQED Vapor Intrusion Risk-Based Concentration Table 1 - June 2023)
(5): RBC for Groundwater in Excavation, Contact to Construction and Excavation Workers
(6): DO readings were anomalous and field repairs failed to correct issue
--: not analyzed / not measured / unknown
<: less than the laboratory method detection limit
>S: RBC exceeds the solubility limit
°C: degrees celsius
*: analyzed using SIM (selected ion monitoring)
µg/L: micrograms per Liter
µs/cm: microsiemens per centimeter

Active: groundwater well currently used for monitoring
amsl: above mean sea level
bgs: below ground surface
BTEX: benzene, toluene, ethylbenzene, and total xylenes
btoc: below top of casing
DIA: casing diameter
DO: dissolved oxygen
DTB: depth to bottom
DTP: depth to product
DTW: depth to water
DTW Δ: Change in depth to water since last monitoring event
EDB: 1,2-dibromoethane
EDC: 1,2-dichloroethane
EPA: Environmental Protection Agency
Fe²⁺: ferrous iron
ft: feet
GW: groundwater
mg/L: milligrams per Liter

mV: millivolts
na: not applicable
Naph: naphthalene
ND: not detected
NM: not measured
NTU: nephelometric turbidity units
nv: chemical is considered "non volatile" for purposes of the exposure calculations in this document
Observation: Observation well located within tank cavity used for periodic gauging
ODEQ: Oregon Department of Environmental Quality
ORP: oxidation reduction potential
pH: potential hydrogen
PT: free-product thickness
RBC: Risked Based Concentration established by the Oregon Department of Environmental Quality (ODEQ)
Sheen: sheen observed in well
Temp: temperature
TPH-Dx: total diesel-range petroleum hydrocarbons, analyzed by Northwest Method NWTPH-Dx
TPH-Gx: total gasoline-range petroleum hydrocarbons, analyzed by Northwest Method NWTPH-Gx
TPH-Ox: total oil-range petroleum hydrocarbons, analyzed by Northwest Method NWTPH-Ox



Table 3
Summary of Historical Groundwater Monitoring Data
United Pacific #5468
Springfield, Oregon
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WELL ID	WELL STATUS	SAMPLE DATE	ANALYTICAL PARAMETERS													MONITORING PARAMETERS			WELL ELEVATION			
			TPH-Ox (µg/L)	TPH-Dx (µg/L)	TPH-Gx (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Naph (µg/L)	EDB (µg/L)	EDC (µg/L)	Other VOCs	DTP ⁽¹⁾ (ft btoc)	DTW (ft btoc)	PT (ft)	CASING ⁽²⁾ (ft amsl)	GW ⁽³⁾ (ft amsl)	GW Δ (ft amsl)		
			NWTPH-Gx		EPA Method 8260D																	
MW-1	Active	03/30/21	--	--	--	--	--	--	--	--	--	--	--	--	12.78	12.79	0.01	512.70	499.92	--		
		06/23/21	--	--	--	--	--	--	--	--	--	--	--	--	13.55	13.83	0.28	--	499.08	-0.83		
		09/23/21	--	--	--	--	--	--	--	--	--	--	--	--	13.56	13.57	0.01	--	499.14	0.05		
		12/22/21	--	--	3,900	260 E	67	<1.0	230	<5.0	<5.0	<0.01	<1.0	(9)	ND	11.61	0.00	--	501.09	1.95		
		01/11/22 ⁽¹⁰⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		03/23/22	--	--	--	--	--	--	--	--	--	--	--	--	12.97	13.00	0.03	--	499.72	-1.37		
		06/28/22	--	--	--	--	--	--	--	--	--	--	--	--	13.14	13.16	0.02	--	499.56	-0.17		
		10/12/22	--	--	--	--	--	--	--	--	--	--	--	--	13.07	13.11	0.04	--	499.62	0.06		
		12/20/22	--	--	2,100	1.1	2.6	<1.0	250	<5.0	<5.0	<0.01	<1.0	(9)	ND	13.17	0.00	--	499.53	-0.09		
		04/06/23	--	--	--	--	--	--	--	--	--	--	--	--	ND	11.64	0.00	--	501.06	1.53		
		06/29/23	--	--	3,200	62	510	65	440	<5.0	19	0.014	<1.0	(9)	ND	12.75	0.00	--	499.95	-1.11		
		09/18/23 ⁽¹¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	14.23	14.25	0.02	--	498.47	-1.48		
		12/13/23	--	--	1,100	<1.0	<2.0	1.4	11	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.78	0.00	--	500.92	2.45		
		03/28/24	--	--	240	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	12.07	0.00	--	500.63	-0.29		
		06/12/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	13.29	13.30	0.01	--	499.41	-1.22		
09/24/24	--	--	12,000	60	240	170	1,100	<5.0	52	<0.010	<1.0	(8)	ND	13.45	0.00	--	499.25	-0.16				
DUP-1		09/24/24	--	--	8,000	92	250	170	910	<5.0	45	<0.010	<1.0	(8)	--	--	--	--	--	--		
MW-2	Active	03/30/21	--	--	--	--	--	--	--	--	--	--	--	11.42	11.93	0.51	511.29	499.75	--			
		06/23/21	--	--	--	--	--	--	--	--	--	--	--	--	12.15	12.16	0.01	--	499.14	-0.61		
		09/23/21	--	--	--	--	--	--	--	--	--	--	--	--	12.09	12.16	0.07	--	499.18	0.05		
		12/22/21	--	--	--	--	--	--	--	--	--	--	--	--	10.50	10.51	0.01	--	500.79	1.60		
		01/11/22 ⁽¹⁰⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		03/23/22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	499.54	-1.25	
		06/28/22	--	--	--	--	--	--	--	--	--	--	--	--	12.12	12.14	0.02	--	499.17	-0.37		
		10/12/22	--	--	--	--	--	--	--	--	--	--	--	--	12.77	12.84	0.07	--	498.50	-0.67		
		12/20/22	--	--	26,000	1,000	2,600	510	2,300	<5.0	89	<0.010	<1.0	(9)	ND	11.95	0.00	--	499.34	0.84		
		04/06/23	--	--	--	--	--	--	--	--	--	--	--	--	ND	10.81	0.00	--	500.48	1.14		
		06/29/23	--	--	31,000	780	5,400	760	4,400	<5.0	70	0.016	<1.0	(9)	ND	12.33	0.00	--	498.96	-1.52		
		09/18/23 ⁽¹¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	12.98	13.04	0.06	--	498.30	-0.66		
		12/13/23	--	--	25,000	260	2,200	620	4,700	<5.0	120	<0.010	<1.0	(9)	ND	10.84	0.00	--	500.45	2.15		
		03/27/24	--	--	4,000	70	340	200	420	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.23	0.00	--	500.06	-0.39		
		06/12/24	--	--	18,000	730	1,000	800	1,100	<5.0	82	<0.010	<1.0	(9)	ND	11.98	0.00	--	499.31	-0.75		
DUP-1		06/12/24	--	--	8,700	530	710	570	750	<5.0	77	<0.010	<1.0	(9)	--	--	--	--	--	--		
09/24/24	--	--	20,000	490	2,500	630	3,500	<5.0	91	<0.010	<1.0	(9)	ND	12.11	0.00	--	499.18	-0.13				
MW-3	Active	03/30/21	--	--	<100	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	ND	11.32	0.00	511.12	499.80	--	
		06/23/21	--	--	<100	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	ND	11.89	0.00	--	499.23	-0.57	
		09/23/21	--	--	<100	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--	
		12/22/21	--	--	<100	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	ND	11.86	0.00	--	499.26	0.03	
		01/11/22 ⁽¹⁰⁾	--	--	110	20	<1.0	<1.0	2.3	<5.0	<5.0	<0.01	<1.0	(8)	ND	10.33	0.00	--	500.79	1.53		
		03/23/22	--	--	260	36	32	1.9	26	<5.0	<5.0	<0.01	<1.0	(9)	ND	11.31	0.00	--	499.81	-0.98		
		06/28/22	--	--	220	<1.0	<1.0	<1.0	32	<5.0	<5.0	<0.01	<1.0	(9)	ND	11.77	0.00	--	499.35	-0.46		
		10/12/22	--	--	<100	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	ND	12.33	0.00	--	498.79	-0.56	
		DUP-1		10/12/22	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		12/20/22	--	--	<100	<1.0	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	ND	11.55	0.00	--	499.57	0.78	
		04/06/23	--	--	<100	56	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(9)	ND	10.50	0.00	--	500.62	1.05		
		06/29/23	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	12.01	0.00	--	499.11	-1.51		
		09/19/23	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	12.48	0.00	--	498.64	-0.47		
		12/13/23	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	10.66	0.00	--	500.46	1.82		
		03/27/24	--	--	950	200	<2.0	50	<2.0	<5.0	5.0	<0.010	<1.0	(8)	ND	10.92	0.00	--	500.20	-0.26		
06/12/24	--	--	<100	25	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.67	0.00	--	499.45	-0.75				
DUP-1		09/24/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.72	0.00	--	499.40	-0.05		
MW-4	Active	03/30/21	--	--	180,000	3,000	25,000 E	3,100	18,000	<5.0	180	<0.01	<1.0	(9)	ND	10.17	0.00	509.78	499.61	--		
		06/23/21	--	--	190,000	3,000	25,000 E	3,000	17,000	<5.0	250	<0.01	<1.0	(9)	--	--	--	--	--	--	--	
		09/23/21	--	--	52,000	1,600	17,000	2,200	21,000	<5.0	500	<0.01	<1.0	(9)	ND	10.83	0.00	--	498.95	-0.66		
		12/22/21	--	--	40,000	1,300	6,600	1,400	8,600	<5.0	530	<0.01	<1.0	(9)	ND	10.78	0.00	--	499.00	0.05		
		01/11/22 ⁽¹⁰⁾	--	--	39,000	1,200	5,500	1,400	6,900	<5.0	620	<0.01	<1.0	(9)	--	--	--	--	--	--	--	
		03/23/22	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	ND	9.11	0.00	--	500.67	1.67		
		06/28/22	--	--	2,400	250	53	<1.0	160	--	--	--	--	--	--	--	--	--	--	--	--	--
		10/12/22	--	--	62,000	1,100	5,900	1,600	10,000	<250	250	<0.5	<5.0	(9)	ND	10.11	0.00	--	499.67	-1.00		
		12/20/22	--	--	37,000	560	1,400	<1.0	10,000	<5.0	130	<0.01	<1.0	(9)	ND	10.53	0.00	--	499.25	-0.42		
		04/06/23	--	--	24,000	600	380	510	5,500	<5.0	78	<0.01	<1.0	(9)	ND	11.26	0.00	--	498.52	-0.73		
		06/29/23	--	--	33,000	330	2,000	480	3,800	50	380	<0.1	<1.0	(9)	ND	10.37	0.00	--	499.41	0.89		
		09/19/23	--	--	4,400	82	<1.0	<1.0	1,500	50	<5.0	<0.10	<1.0	(9)	ND	10.29	0.00	--	499.49	0.08		
		12/13/23	--	--	4,000	67	190	33	890	<5.0	48	<0.010	<1.0	(9)	ND	10.93	0.00	--	498.85	-0.64		
		DUP-1		09/19/23	--	--	19,000	300	140	3.9	5,100	<5.0	130	<0.010	<1.0	(9)	ND	11.29	0.00	--	498.49	-0.36
		12/13/23	--	--	7,800	56	420	290	1,500	<5.0	92	<0.010	<1.0	(9)	ND	9.29	0.00	--	500.49	2.00		
03/27/24	--	--	6,800	53	500	170	1,400	<5.0	19	<0.010	<1.0	(9)	--	--	--	--	--	--	--	--		
06/12/24	--	--	1,600	140	4.7	<1.0	220	<5.0	26	<0.010	<1.0	(9)	ND	9.80	0.00	--	499.98	-0.51				
DUP-1		09/24/24	--	--	170	<1.0	<2.0	<1.0	20	<5.0	15	<0.010	<1.0	(8)	ND	10.38	0.00	--	499.40	-0.58		
DUP-1		09/24/24	--	--	970	<1.0	<2.0	8.7	290	<5.0	11	<0.010	<1.0	(8)	ND	10.51	0.00	--	499.27	-0.13		



Table 3
Summary of Historical Groundwater Monitoring Data
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WELL ID	WELL STATUS	SAMPLE DATE	ANALYTICAL PARAMETERS												MONITORING PARAMETERS			WELL ELEVATION			
			TPH-Ox (µg/L)	TPH-Dx (µg/L)	TPH-Gx (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Naph (µg/L)	EDB (µg/L)	EDC (µg/L)	Other VOCs	DTP ⁽¹⁾ (ft btoc)	DTW (ft btoc)	PT (ft)	CASING ⁽²⁾ (ft amsl)	GW ⁽³⁾ (ft amsl)	GW Δ (ft amsl)	
			NWTPH-Gx		EPA Method 8260D																
MW-5	Active	03/30/21	--	--	250,000 E	3,900	34,000 E	3,500	23,000	<5.0	230	<0.01	<1.0	(9)	ND	9.56	0.00	509.10	499.54	--	
		06/23/21	--	--	58,000	4,400	24,000 E	2,500	17,000	<5.0	350	<0.01	<1.0	(9)	ND	10.29	0.00	498.81	498.81	-0.73	
		09/23/21	--	--	65,000	3,900	18,000 E	1,600	11,000	<5.0	450	<0.01	<1.0	(9)	ND	10.27	0.00	498.83	498.83	0.02	
		12/22/21	--	--	230,000 E	4,900	29,000 E	210	18,000	<5.0	310	<0.01	<1.0	(9)	ND	8.45	0.00	500.65	500.65	1.82	
		01/11/22 ⁽¹⁰⁾	--	--	--	--	--	--	--	--	--	--	--	--	ND	--	--	--	--	--	--
		03/23/22	--	--	110,000	4,000	14,000 E	1,800	15,000	<250	360	<0.5	<5.0	(9)	ND	9.50	0.00	499.60	499.60	-1.05	
		06/29/22	--	--	260,000 E	5,800	45,000 E	2,900	34,000 E	<5.0	320	<0.01	<1.0	(9)	ND	10.02	0.00	499.08	499.08	-0.52	
		10/12/22	--	--	--	--	--	--	--	--	--	--	--	--	11.68	11.75	0.07	497.40	497.40	-1.68	
		12/20/22	--	--	80,000	3,700	10,000	1,800	11,000	50	270	<0.1	<10	(9)	ND	9.90	0.00	499.20	499.20	1.80	
		04/06/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	8.66	0.00	500.44	500.44	1.24	
		06/29/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	10.50	10.56	0.06	498.59	498.59	-1.85	
		09/19/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	11.98	0.00	497.12	497.12	-1.47	
		12/13/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	8.78	8.79	0.01	500.32	500.32	3.20	
		03/28/24	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	9.00	0.00	500.10	500.10	-0.22	
		06/12/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	10.04	0.00	499.06	499.06	-1.04	
09/24/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	10.49	0.00	498.61	498.61	-0.45			
MW-6	Active	03/30/21	--	--	--	--	--	--	--	--	--	--	--	--	10.50	12.15	1.65	510.51	499.62	--	
		06/23/21	--	--	--	--	--	--	--	--	--	--	--	--	11.60	11.62	0.02	498.91	498.91	-0.72	
		09/23/21	--	--	--	--	--	--	--	--	--	--	--	--	11.47	11.88	0.41	498.94	498.94	0.04	
		12/22/21	--	--	--	--	--	--	--	--	--	--	--	--	9.91	9.92	0.01	500.60	500.60	1.65	
		01/11/22 ⁽¹⁰⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		03/23/22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		06/28/22	--	--	--	--	--	--	--	--	--	--	--	--	11.17	11.86	0.69	499.18	499.18	-1.42	
		10/12/22	--	--	--	--	--	--	--	--	--	--	--	--	11.99	12.12	0.13	498.49	498.49	-0.69	
		12/20/22	--	--	--	--	--	--	--	--	--	--	--	--	11.09	11.64	0.55	499.29	499.29	0.80	
		04/06/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	9.95	10.00	0.05	500.55	500.55	1.26	
		06/29/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	11.78	11.89	0.11	498.70	498.70	-1.84	
		09/19/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	12.26	12.30	0.04	498.24	498.24	-0.46	
		12/13/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	10.10	0.00	500.41	500.41	2.17	
		03/28/24	--	--	--	--	--	--	--	--	--	--	--	--	10.30	10.31	0.01	500.21	500.21	-0.20	
		06/12/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	11.34	11.38	0.04	499.16	499.16	-1.05	
09/24/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	12.78	0.00	497.73	497.73	-1.43			
MW-7	Active	03/30/21	--	--	260	33	1.7	<1.0	3.6	<5.0	<5.0	<0.01	<1.0	(8)	ND	12.12	0.00	511.65	499.53	--	
		06/23/21	--	--	170	11	39	6.3	46	<5.0	<5.0	<0.01	<1.0	(9)	ND	12.85	0.00	498.80	498.80	-0.73	
		09/23/21	--	--	<100	9.0	17	2.0	15	<5.0	<5.0	<0.01	<1.0	(9)	ND	--	--	--	--	--	--
		12/22/21	--	--	850	170	84	7.5	67	<5.0	<5.0	<0.01	<1.0	(9)	ND	12.82	0.00	498.83	498.83	0.03	
		01/11/22 ⁽¹⁰⁾	--	--	15,000	980	2,300 E	140	850	<5.0	23	<0.01	<1.0	(9)	ND	10.89	0.00	500.76	500.76	1.93	
		03/23/22	--	--	21,000 E	790 E	1,400 E	159	890 E	<5.0	24	<0.01	<1.0	(9)	--	--	--	--	--	--	
		06/28/22	--	--	14,000	1,000	2,900	200	1,300	<5.0	28	<0.01	<1.0	(9)	ND	12.00	0.00	499.65	499.65	-1.11	
		10/12/22	--	--	22,000	1,200	3,300	230	1,400	<250	<250	<0.5	<5.0	(9)	--	--	--	--	--	--	
		12/20/22	--	--	17,000	1,100	3,900	320	1,100	<5.0	31	<0.01	<1.0	(9)	ND	12.56	0.00	499.09	499.09	-0.56	
		04/06/23 ⁽¹⁾	--	--	24,000	1,300	3,500	240	1,600	<5.0	9.7	<0.01	<1.0	(9)	ND	13.18	0.00	498.47	498.47	-0.62	
		06/29/23	--	--	5,000	710	890	120	490	<5.0	34	<0.01	<1.0	(9)	ND	12.33	0.00	499.32	499.32	0.85	
		09/19/23	--	--	9,200	670	530	320	1,600	<5.0	33	<0.010	<1.0	(9)	ND	12.98	0.00	498.67	498.67	-1.91	
		12/13/23 ⁽¹⁾	--	--	8,000	710	570	350	1,800	<5.0	23	<0.010	<1.0	(9)	--	--	--	--	--	--	
		03/27/24	--	--	7,100	510	210	180	1,200	<5.0	37	<0.010	<1.0	(9)	ND	13.34	0.00	498.31	498.31	-0.36	
		06/11/24	--	--	3,300	250	76	57	580	<5.0	21	<0.010	<1.0	(9)	--	--	--	--	--	--	
09/24/24	--	--	3,900	170	43	130	630	<5.0	110	<0.010	<1.0	(9)	ND	11.04	0.00	500.61	500.61	2.30			
MW-8	Active	03/30/21	--	--	6,100	230	21	260	1,200	<5.0	19	<0.010	<1.0	(9)	ND	11.62	0.00	500.03	500.03	-0.58	
		06/23/21	--	--	5,000	170	12	200	920	<5.0	72	<0.010	<1.0	(9)	ND	12.47	0.00	499.18	499.18	-0.85	
		09/23/21	--	--	710	32	<2.0	17	68	<5.0	12	<0.010	<1.0	(9)	ND	12.60	0.00	499.05	499.05	-0.13	
		12/22/21	--	--	<100	<1.0	2.7	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	ND	11.55	0.00	509.75	498.20	--	
		01/11/22 ⁽¹⁰⁾	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	9.96	0.00	499.79	499.79	1.59	
		03/23/22	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--	
		06/28/22	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.94	0.00	497.81	497.81	-1.98	
		10/12/22	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	12.51	0.00	497.24	497.24	-0.57	
		12/20/22	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	10.08	0.00	499.67	499.67	2.43	
		04/06/23 ⁽¹⁾	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	10.58	0.00	499.17	499.17	-0.50	
		06/29/23	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.63	0.00	498.12	498.12	-1.05	
		09/19/23	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.91	0.00	497.84	497.84	-0.28	
		12/13/23 ⁽¹⁾	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	ND	10.52	0.00	509.89	499.37	--	
		03/27/24	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	9.30	0.00	500.59	500.59	1.22	
		06/11/24	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.03	0.00	498.86	498.86	-1.73	
09/24/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.54	0.00	498.35	498.35	-0.51			
MW-9	Active	03/30/21	--	--	<100																

Table 3
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WELL ID	WELL STATUS	SAMPLE DATE	ANALYTICAL PARAMETERS													MONITORING PARAMETERS			WELL ELEVATION		
			TPH-Ox (µg/L)	TPH-Dx (µg/L)	TPH-Gx (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Naph (µg/L)	EDB (µg/L)	EDC (µg/L)	Other VOCs	DTP ⁽¹⁾ (ft btoc)	DTW (ft btoc)	PT (ft)	CASING ⁽²⁾ (ft amsl)	GW ⁽³⁾ (ft amsl)	GW Δ (ft amsl)	
			NWTPH-Gx		EPA Method 8260D																
MW-11	Active	12/20/22	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	ND	11.70	0.00	511.69	499.99	--	
		04/06/23	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	10.59	0.00	501.10	499.32	1.11	
		06/29/23	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	12.37	0.00	499.32	499.00	-1.78	
		09/19/23	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	12.69	0.00	499.00	500.89	-0.32	
		12/13/23	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	10.80	0.00	500.89	500.57	1.89	
		03/27/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.12	0.00	499.58	499.58	-0.32	
		06/12/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	11.80	0.00	499.89	499.58	-0.68	
		09/24/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	ND	12.11	0.00	499.58	499.58	-0.31	
EW-1	Active	03/30/21	--	--	--	--	--	--	--	--	--	--	--	--	11.05	11.14	0.09	510.97	499.90	--	
		06/23/21	--	--	156,000	11,000	66,000 E	5,600	36,000	<5.0	650	<0.01	<1.0	(9)	ND	11.74	0.00	499.23	499.25	-0.67	
		09/23/21	--	--	21,000	490	4,200	550	3,200	<5.0	110	<0.01	<1.0	(9)	ND	11.72	0.00	499.25	501.07	1.82	
		12/22/21	--	--	40,000	560	2,700 E	580	<20	<50	87	<0.10	<1.0	(9)	ND	9.90	0.00	501.07	--	--	
		12/22/21	--	--	40,000	600	2,900 E	620	<20	<50	22	<0.10	<1.0	(9)	--	--	--	--	--	--	
		01/11/22 ⁽¹⁰⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		03/23/22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		Abandoned ⁽¹¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EW-1R ⁽¹²⁾	Active	10/12/22	--	--	--	--	--	--	--	--	--	--	--	--	12.17	12.19	0.02	510.86	498.69	--	
		12/20/22	--	--	--	--	--	--	--	--	--	--	--	--	ND	11.32	0.00	499.54	500.75	1.21	
		04/06/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	10.10	10.11	0.01	500.75	499.04	-1.71	
		06/29/23	--	--	25,000	1,600	3,500	900	4,800	<5.0	17	<0.010	<1.0	(9)	ND	11.82	0.00	499.04	498.52	-0.52	
		9/18/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	12.30	12.45	0.15	498.52	500.68	2.16	
		12/13/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	10.18	0.00	500.68	500.43	-0.25	
		03/28/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	10.43	10.44	0.01	500.43	499.34	-1.08	
		06/12/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	11.51	11.54	0.03	499.34	498.97	-0.37	
		09/24/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	11.89	0.00	498.97	--	--	
		Abandoned ⁽¹¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EW-2	Active	03/30/21	--	--	--	--	--	--	--	--	--	--	--	--	11.20	11.28	0.08	510.90	498.68	--	
		06/23/21	--	--	--	--	--	--	--	--	--	--	--	--	11.88	12.07	0.19	498.98	499.05	0.08	
		09/23/21	--	--	--	--	--	--	--	--	--	--	--	--	11.84	11.87	0.03	499.05	500.70	1.64	
		12/22/21	--	--	--	--	--	--	--	--	--	--	--	--	10.20	10.22	0.02	500.70	--	--	
		01/11/22 ⁽¹⁰⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		03/23/22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		Abandoned ⁽¹¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		EW-2R ⁽¹²⁾	Active	10/12/22	--	--	--	--	--	--	--	--	--	--	--	12.32	12.34	0.02	510.91	498.59	--
12/20/22	--	--	--	--	--	--	--	--	--	--	--	--	--	11.53	11.54	0.01	499.38	500.59	1.21		
04/06/23	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	10.32	0.00	500.59	498.74	-1.85		
06/29/23	--	--	5,200	340	1,200	180	710	<5.0	27	<0.010	<1.0	(9)	ND	12.17	0.00	498.74	498.45	-0.29			
09/19/23	--	--	840	6.5	3.4	<1.0	140	<5.0	6.2	<0.010	<1.0	(8)	ND	12.46	0.00	498.45	500.47	2.02			
12/13/23	--	--	200,000	2,100	35,000	3,900	17,000	<5.0	610	<0.010	<1.0	(9)	ND	10.44	0.00	500.47	500.26	-0.21			
03/28/24	--	--	69,000	920	9,000	850	13,000	<5.0	51	<0.010	<1.0	(9)	ND	10.65	0.00	500.26	499.25	-1.01			
06/12/24	--	--	89,000	2,300	19,000	2,000	20,000	<5.0	800	<0.010	<1.0	(9)	ND	11.66	0.00	499.25	499.69	0.44			
09/24/24	--	--	13,000	300	2,300	330	2,100	<5.0	53	<0.010	<1.0	(9)	ND	11.22	0.00	499.69	--	--			
EW-3	Active	03/30/21	--	--	--	--	--	--	--	--	--	--	--	--	11.68	11.90	0.22	511.63	499.90	--	
		06/23/21	--	--	--	--	--	--	--	--	--	--	--	--	12.40	12.41	0.01	499.23	499.25	-0.67	
		09/23/21	--	--	--	--	--	--	--	--	--	--	--	--	12.36	12.45	0.09	499.25	500.87	1.62	
		12/22/21	--	--	--	--	--	--	--	--	--	--	--	--	10.76	10.77	0.01	500.87	--	--	
		01/11/22 ⁽¹⁰⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		03/23/22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		Abandoned ⁽¹¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		EW-4 ⁽¹²⁾	Active	10/12/22	--	--	--	--	--	--	--	--	--	--	--	12.89	12.90	0.01	510.67	497.78	--
12/20/22	--	--	--	--	--	--	--	--	--	--	--	--	--	12.08	12.30	0.22	498.54	499.67	1.13		
4/06/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	Sheen	11.00	0.00	499.67	497.95	-1.72		
06/29/23	--	--	40,000	2,700	8,900	910	5,900	<5.0	89	<0.010	<1.0	(9)	ND	12.72	0.00	497.95	497.60	-0.35			
09/19/23	--	--	17,000	1,200	2,000	110	2,000	<5.0	48	0.023	<1.0	(9)	ND	13.07	0.00	497.60	499.68	2.08			
12/13/23	--	--	98,000	7,000	17,000	2,700	7,100	<5.0	590	<0.010	<1.0	(9)	ND	10.99	0.00	499.68	499.47	-0.21			
03/28/24	--	--	64,000	1,800	10,000	1,300	7,900	<5.0	130	<0.010	<1.0	(9)	ND	11.20	0.00	499.47	498.47	-1.00			
06/12/24	--	--	68,000	3,400	16,000	1,900	9,300	<5.0	750	<0.010	<1.0	(9)	ND	12.20	0.00	498.47	498.37	-0.10			
09/24/24	--	--	20,000	960	2,500	380	3,400	<5.0	96	<0.010	<1.0	(9)	ND	12.30	0.00	498.37	--	--			



Table 3
Summary of Historical Groundwater Monitoring Data
United Pacific #5468
Springfield, Oregon
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WELL ID	WELL STATUS	SAMPLE DATE	ANALYTICAL PARAMETERS												MONITORING PARAMETERS			WELL ELEVATION		
			TPH-Ox (µg/L)	TPH-Dx (µg/L)	TPH-Gx (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Naph (µg/L)	EDB (µg/L)	EDC (µg/L)	Other VOCs	DTP ⁽¹⁾ (ft btoc)	DTW (ft btoc)	PT (ft)	CASING ⁽²⁾ (ft amsl)	GW ⁽³⁾ (ft amsl)	GW Δ (ft amsl)
			NWTPH-Dx		NWTPH-Gx		EPA Method 8260D													
QA/QC Samples																				
EB-1		03/30/21	--	--	<100	<1.0	1.1	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		06/23/21	--	--	<100	<1.0	10	1.3	8.1	<5.0	<5.0	<0.01	<1.0	(9)	--	--	--	--	--	--
		09/23/21	--	--	100	<1.0	2.2	<1.0	2.3	<5.0	<5.0	<0.01	<1.0	(9)	--	--	--	--	--	--
		12/22/21	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(9)	--	--	--	--	--	--
		03/23/22	--	--	<100	<1.1	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		06/28/22	--	--	<100	<1.1	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		10/12/22	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		12/19/22	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		04/06/23	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		06/29/23	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		09/19/23	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		12/12/23	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		03/27/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		06/11/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		09/24/24	--	--	<100	<1.0	2.7	<1.0	12	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
EB-2		06/29/22	--	--	<100	<1.1	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		12/20/22	--	--	<100	<1.1	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
EB-2 Dup		12/20/22	--	--	<100	<1.1	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		06/29/23	--	--	<100	<1.1	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		09/19/23	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		12/13/23	--	--	770	3.8	140	20	160	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		03/27/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		06/12/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
Trip Blank		06/23/21	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		12/22/21	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		03/23/22	--	--	<100	<1.1	<1.0	<1.0	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		10/12/22	--	--	<100	<1.0	<1.0	1.2	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		12/20/22	--	--	<100	<1.0	<1.0	1.2	<2.0	<5.0	<5.0	<0.01	<1.0	(8)	--	--	--	--	--	--
		04/06/23	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		06/29/23	--	--	<100	<1.0	<1.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		09/19/23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		12/13/23	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		03/27/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		06/11/24	--	--	<100	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
		09/24/24	--	--	--	<1.0	<2.0	<1.0	<2.0	<5.0	<5.0	<0.010	<1.0	(8)	--	--	--	--	--	--
RBC: Injection/Inhalation from Tapwater ⁽⁴⁾			430	430	450	2.1	6,300	6.4	830	68	0.72	0.034	0.78	--	na	na	na	na	na	na
RBC: Volatilization to Outdoor Air ⁽⁵⁾			>S	>S	>S	14,000	>S	43,000	>S	1,500,000	16,000	790	9,000	--	na	na	na	na	na	na
RBC: Volatilization to Indoor Air ⁽⁶⁾			1,700	1,700	520	12/650	150,000/160,000	31/420,000	3,300/200,000	3,200/1,600,000	50/83,000	1.5/--	55/--	--	na	na	na	na	na	na
RBC: Groundwater in Excavations ⁽⁷⁾			>S	>S	14,000	1,800	220,000	4,500	23,000	63,000	500	27	630	--	na	na	na	na	na	na

Notes:

Results in **BOLD** indicate detections that exceed ODEQ Risk-Based Concentrations (RBCs) for groundwater

- (1): wells containing free-product were not sampled
- (2): top of casing elevations surveyed on 12/09/20 and 03/22/21.
- (3): groundwater elevation corrected for the presence of free-product using the following calculation:
casing elevation minus depth to water plus the product thickness times its density (0.765). An average density of 0.765 (based on published literature) is used in the calculation.
- (4): RBC for Groundwater - Injection and Inhalation from Tapwater, occupational receptor scenario (see ODEQ Table of RBCs - revised May 2018 amended June 2023)
- (5): RBC for Groundwater - Volatilization to Outdoor Air, occupational receptor scenario (see ODEQ Table of RBCs - revised May 2018 amended June 2023)
- (6): RBC for Groundwater - Volatilization to Indoor Air, Commercial scenario; Chronic/Acute screening values (see OQED Vapor Intrusion Risk-Based Concentration Table 1 - June 2023)
- (7): RBC for Groundwater in Excavation, Contact to Construction and Excavation Workers
- (8): No other VOCs detected in sample
- (9): Other VOCs detected in sample; refer to Table 4 for other VOCs detected
- (10): Confirmation samples collected from Wells MW-4 and MW-7 on 1/11/2022
- (11): Wells EW-1, EW-2, and EW-3 abandoned on March 7 and 8, 2022
- (12): Wells EW-1R, EW-2R, and EW-4 installed on September 20 and 21, 2022
- : not analyzed / not measured / unknown
- <: less than the laboratory method reporting limit
- >S: RBC exceeds the solubility limit
- µg/L: micrograms per Liter

Active: groundwater well currently used for monitoring

amsl: above mean sea level

BTEX: benzene, toluene, ethylbenzene, and total xylenes

btoc: below top of casing

DTP: depth to product

DTW: depth to water

DTW Δ: Change in depth to water since last monitoring event

DUP: duplicate sample

E: reported result is an estimate because it exceeds the calibration range

EB-1: equipment blank

EDB: 1,2-dibromoethane

EDC: 1,2-dichloroethane

ft: feet

GW: groundwater

MTBE: Methyl tert-butyl ether

na: not applicable

ND: not detected

PT: free-product thickness

RBC: Risked Based Concentration established by the Oregon Department of Environmental Quality (ODEQ)

TPH-Dx: total diesel-range petroleum hydrocarbons, analyzed by Northwest Method NWTPH-Dx

TPH-Gx: total gasoline-range petroleum hydrocarbons, analyzed by Northwest Method NWTPH-Gx

TPH-Ox: total oil-range petroleum hydrocarbons, analyzed by Northwest Method NWTPH-Ox



TABLE 4
Additional VOCs detected in Groundwater
United Pacific #5468
Springfield, Oregon
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Boring ID	Well Status	Date Sampled	CM	IPB	NPB	1,3,5-TMB	1,2,4-TMB	SBB	IPT	TBB	NBB	2-methyl	1-methyl	
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Method 8260D														
MW-1	Active	03/30/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/23/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		09/23/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/22/21	33	<4.0	<1.0	41	36	<1.0	2.3	<1.0	<1.0	--	--	
		03/23/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/28/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		10/12/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/20/22	2.4	<4.0	<1.0	140	83	<1.0	9.7	<1.0	3.6	--	--	
		04/06/23	--	--	--	--	--	--	--	--	--	--	--	
		06/29/23	<2.0	<4.0	8.8	24	94	<1.0	1.3	<1.0	<1.0	--	--	
		09/18/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/13/23	--	--	--	--	--	--	--	--	--	--	<5.0	<5.0
		03/28/24	--	--	--	--	--	--	--	--	--	--	<5.0	<5.0
		06/12/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	--
09/24/24	--	--	--	--	--	--	--	--	--	--	55	37		
MW-2	Active	03/30/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/23/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		09/23/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/22/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		03/23/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		6/28/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		10/12/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/20/22	24	31	99	150	560	<1.0	<1.0	<1.0	6.8	--	--	
		04/06/23	--	--	--	--	--	--	--	--	--	--	--	
		06/29/23	<2.0	36	130	230	880	7.0	15	<1.0	7.0	--	--	
		09/18/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/13/23	--	--	--	--	--	--	--	--	--	--	83	49
		03/27/24	--	--	--	--	--	--	--	--	--	--	<5.0	<5.0
		06/12/24	--	--	--	--	--	--	--	--	--	--	35	24
DUP-1	06/12/24	--	--	--	--	--	--	--	--	--	31	19		
09/24/24	--	--	--	--	--	--	--	--	--	--	51	29		
MW-3	Active	03/30/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		06/23/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		09/23/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		12/22/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		03/23/22	<2.0	<4.0	<1.0	<1.0	2.0	<1.0	<1.0	<1.0	<1.0	--	--	
		06/28/22	<2.0	<4.0	<1.0	5.8	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		10/12/22	<2.0	<4.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	--	--	
		10/12/22	<2.0	<4.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	--	--	
		12/20/22	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		04/06/23	2.2	<4.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		06/29/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		09/19/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		12/13/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		03/27/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
06/12/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0			
09/24/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0			
MW-4	Active	03/30/21	<2.0	74	190	430	1,700	<1.0	11	280	6.8	--	--	
		DUP-1	03/30/21	<2.0	73	220	460	1,800	<1.0	12	270	6.6	--	--
		06/23/21	24	52	94	750	2,800	<1.0	15	1.0	6.2	--	--	
		DUP-1	09/22/21	18	59	120	250	1,200	<1.0	12	1.0	4.6	--	--
		09/23/21	15	52	110	340	1,200	<1.0	11	<1.0	4.1	--	--	
		12/22/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		03/23/22	<100	<200	140	500	1,700	<50	50	250	50	--	--	
		06/29/22	18	<4.0	<1.0	310	1,300	<1.0	<1.0	<1.0	<1.0	--	--	
		10/12/22	14	12	10	430	1,300	2.4	15	86	11	--	--	
		12/20/22	20	40	11	320	990	<10	11	<10	41	--	--	
		04/06/23	<20	<40	<10	46	14	<10	<10	<10	<10	--	--	
		06/29/23	<2.0	4.2	4.5	27	120	<1.0	2.5	<1.0	<1.0	--	--	
		09/18/23	--	--	--	--	--	--	--	--	--	27	40	
		12/13/23	--	--	--	--	--	--	--	--	--	21	16	
DUP-1	12/13/23	--	--	--	--	--	--	--	--	<5.0	<5.0			
03/27/24	--	--	--	--	--	--	--	--	--	<5.0	5.7			
06/12/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0			
09/24/24	--	--	--	--	--	--	--	--	--	5.8	<5.0			
MW-5	Active	03/30/21	<2.0	94	300	600	2,600	<1.0	19	410	10	--	--	
		06/23/21	38	66	310	860	2,900	<1.0	25	<1.0	13	--	--	
		09/23/21	48	57	140	560	1,800	<1.0	20	<1.0	9	--	--	
		12/22/21	<2.0	71	1,700	590	2,100	<1.0	26	<1.0	<1.0	--	--	
		03/23/22	<100	<200	170	840	2,600	<50	<50	<50	<50	--	--	
		06/29/22	87	83	154	1,200	4,100	<1.0	31	570	107	--	--	
		10/12/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/20/22	20	80	300	630	1,900	<10	24	<10	14	--	--	
		04/06/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/29/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		09/18/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/13/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		03/28/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/12/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
09/24/24	--	--	--	--	--	--	--	--	--	--	--			



TABLE 4
Additional VOCs detected in Groundwater
United Pacific #5468
Springfield, Oregon
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Boring ID	Well Status	Date Sampled	CM	IPB	NPB	1,3,5-TMB	1,2,4-TMB	SBB	IPT	TBB	NBB	2-methyl	1-methyl	
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Method 8260D														
MW-6	Active	03/30/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/23/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		09/23/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/22/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		03/23/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/28/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		10/12/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/20/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		04/06/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/29/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		09/18/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/13/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		03/28/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/12/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
09/24/24	--	--	--	--	--	--	--	--	--	--	--			
MW-7	Active	03/30/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		06/23/21	<2.0	<4.0	<1.0	3.7	12	<1.0	<1.0	<1.0	<1.0	--	--	
		DUP-1	06/23/21	<2.0	<4.0	<1.0	1.1	3.5	<1.0	<1.0	<1.0	<1.0	--	--
		MW-7 Dup	09/23/21	8.4	<4.0	<1.0	1.8	6.9	<1.0	<1.0	<1.0	<1.0	--	--
			12/22/21	18	3.9	8.9	19	71	<1.0	<1.0	<1.0	<1.0	--	--
			12/22/21	21	4.7	11	24	89	<1.0	<1.0	<1.0	<1.0	--	--
			03/23/22	4.1	7.9	20	41	130	<1.0	1.8	<1.0	<1.0	--	--
		DUP-2	03/23/22	<100	<200	<50	<50	140	<50	<50	<50	<50	--	--
			06/28/22	<2.0	5.2	14	35	162	<1.0	<1.0	23	5.8	--	--
			10/12/22	<2.0	5.7	17	38	150	<1.0	<1.0	24	<1.0	--	--
			12/20/22	<2.0	4.5	13	32	120	<1.0	1.4	<1.0	<1.0	--	--
		DUP-1	04/06/23	--	--	--	--	--	--	--	--	--	--	--
			06/29/23	<2.0	9.5	<1.0	55	300	1.6	2.3	<1.0	<1.0	--	--
		DUP-1	06/29/23	<2.0	9.6	29	62	330	1.6	2.4	<1.0	<1.0	--	--
09/19/23	--		--	--	--	--	--	--	--	--	15	10		
09/19/23	--		--	--	--	--	--	--	--	--	12	7.6		
12/12/23	--		--	--	--	--	--	--	--	--	32	22		
03/27/24	--		--	--	--	--	--	--	--	--	<5.0	<5.0		
06/11/24	--		--	--	--	--	--	--	--	--	8.2	<5.0		
09/24/24	--	--	--	--	--	--	--	--	--	<5.0	6.8			
MW-8	Active	12/19/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		DUP-1	04/06/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		04/06/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		06/29/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		09/18/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		12/12/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		03/27/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		06/12/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
09/24/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0			
MW-9	Active	12/19/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		DUP-1	04/06/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		04/06/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		06/29/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		09/18/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		12/12/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		03/27/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		06/12/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
09/24/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0			
MW-10	Active	12/20/22	<2.0	<4.0	<1.0	<1.0	3.6	<1.0	<1.0	<1.0	<1.0	--	--	
		DUP-1	12/20/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		04/06/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		06/29/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		09/18/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		12/12/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		03/27/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		06/11/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
09/24/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0			
MW-11	Active	12/20/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		DUP-1	04/06/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		04/06/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		06/29/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	
		09/19/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		12/13/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		03/27/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
		06/12/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0	
09/24/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0			
EW-1	Active	03/30/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/23/21	46	100	490	930	3,900	<1.0	19	<1.0	9.3	--	--	
		09/22/21	13	22	63	130	520	<1.0	7.0	<1.0	3.6	--	--	
		12/22/21	29	29	91	220	742	<1.0	12	<1.0	<1.0	--	--	
		DUP-1	12/22/21	30	31	97	230	770	<1.0	11	<1.0	<1.0	--	--
Abandoned ⁽⁹⁾	03/23/22	--	--	--	--	--	--	--	--	--	--	--		
EW-1R ⁽⁷⁾	Active	10/12/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/20/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		04/06/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/29/23	<2.0	11	35	61	1,000	2.8	4.4	<1.0	2.8	--	--	
		09/19/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		12/13/23 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		03/28/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
		06/12/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--	
09/24/24 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--			



TABLE 4
Additional VOCs detected in Groundwater
United Pacific #5468
Springfield, Oregon
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Boring ID	Well Status	Date Sampled	CM	IPB	NPB	1,3,5-TMB	1,2,4-TMB	SBB	IPT	TBB	NBB	2-methyl	1-methyl
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Method 8260D													
EW-2	Active	03/30/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		06/23/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		09/23/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		12/22/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		03/23/22	--	--	--	--	--	--	--	--	--	--	--
EW-2R ⁽⁷⁾	Active	10/12/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		12/20/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		04/06/23	--	--	--	--	--	--	--	--	--	--	--
		06/29/23	<2.0	16	1.3	36	160	1.2	1.2	<1.0	1.3	--	--
		09/19/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0
		12/13/23	--	--	--	--	--	--	--	--	--	220	260
		03/28/24	--	--	--	--	--	--	--	--	--	51	31
		06/12/24	--	--	--	--	--	--	--	--	--	65	29
		09/24/24	--	--	--	--	--	--	--	--	--	17	11
EW-3	Active	03/30/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		06/23/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		09/23/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		12/22/21 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		03/23/22	--	--	--	--	--	--	--	--	--	--	--
EW-4 ⁽⁷⁾	Active	10/12/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		12/20/22 ⁽¹⁾	--	--	--	--	--	--	--	--	--	--	--
		04/06/23 ⁽¹⁾	<2.0	37	110	220	900	7.3	10	<1.0	8.1	--	--
		06/29/23	--	--	--	--	--	--	--	--	--	43	25
		09/19/23	--	--	--	--	--	--	--	--	--	170	190
		12/13/23	--	--	--	--	--	--	--	--	--	92	36
		03/28/24	--	--	--	--	--	--	--	--	--	140	83
		06/12/24	--	--	--	--	--	--	--	--	--	54	32
		09/24/24	--	--	--	--	--	--	--	--	--	54	32
QA/QC Samples													
EB-1		03/30/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		06/23/21	<2.0	<4.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	--	--
		09/23/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		12/22/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		03/23/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		06/28/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		10/12/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		12/19/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		04/06/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		06/29/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		09/19/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0
		12/12/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0
		03/27/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0
		06/11/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0
09/24/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0		
EB-2	EB-2 Dup	06/29/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		12/20/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		12/20/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		06/29/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		09/19/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0
		12/13/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0
		03/27/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0
Trip Blank		06/23/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		12/22/21	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		03/23/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		10/12/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		12/20/22	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		04/06/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		06/29/23	<2.0	<4.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
		09/19/23	--	--	--	--	--	--	--	--	--	--	--
		12/12/23	--	--	--	--	--	--	--	--	--	<5.0	<5.0
		03/27/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0
06/11/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0		
09/24/24	--	--	--	--	--	--	--	--	--	<5.0	<5.0		



TABLE 4
Additional VOCs detected in Groundwater
United Pacific #5468
Springfield, Oregon
Page 4 of 4

Boring ID	Well Status	Date Sampled	CM	IPB	NPB	1,3,5-TMB	1,2,4-TMB	SBB	IPT	TBB	NBB	2-methyl	1-methyl
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Method 8260D													
RBC: Ingestion/Inhalation from Tapwater ⁽²⁾			79	2,000	ne	280	250	ne	ne	ne	ne	ne	ne
RBC: Volatilization to Outdoor Air ⁽³⁾			1,800,000	>S	ne	>S	>S	ne	ne	ne	ne	ne	ne
RBC: Volatilization to Indoor Air ⁽⁴⁾			1,500/12,000	9,100/--	22,000/--	1,700/--	2,400/--	ne	ne	NITI	NITI	ne	ne
RBC: Groundwater in Excavations ⁽⁵⁾			22,000	51,000	ne	7,500	6,300	ne	ne	ne	ne	ne	ne
<p>Notes:</p> <p>Results in BOLD indicate detections that exceed the ODEQ Risk-Based Concentrations (RBCs) for groundwater samples analyzed for gasoline-range organics using NWTPH-Gx and BTEX using Method 8260D; select samples further analyzed for diesel- and oil-range organics using NWTPH-Dx/Ox, for full scan VOCs using Method 8260</p> <p>(1): sample not collected due to liquid-phase hydrocarbons (LPH; free-product) in well</p> <p>(2): RBC for Groundwater - Ingestion and Inhalation from Tapwater, occupational receptor scenario (see ODEQ Table of RBCs - revised May 2018 amended June 2023)</p> <p>(3): RBC for Groundwater - Volatilization to Outdoor Air, occupational receptor scenario (see ODEQ Table of RBCs - revised May 2018 amended June 2023)</p> <p>(4): RBC for Groundwater - Volatilization to Indoor Air, Commercial scenario; Chronic/Acute screening values (see ODEQ Vapor Intrusion Risk-Based Concentration Table 1 - June 2023)</p> <p>(5): RBC for Groundwater in Excavation, Contact to Construction and Excavation Workers</p> <p>(6): Wells EW-1, EW-2, and EW-3 abandoned on March 7 and 8, 2022</p> <p>(7): Wells EW-1R, EW-2R, and EW-4 installed on September 20 and 21, 2022</p> <p>1,2,4-TMB: 1,2,4-trimethylbenzene 1,3,5-TMB: 1,3,5-trimethylbenzene 1-methyl: 1-methylnaphthalene 2-methyl: 2-methylnaphthalene --: not analyzed</p> <p><: not detected at or above stated laboratory reporting limit (RL)</p> <p>>S: groundwater RBC exceeds the solubility limit. Refer to RBC Table Appendix D for value of S. Groundwater concentration in excess of S indicate free product may be present</p> <p>BB: butylbenzene CM: chloromethane DUP: duplicate sample EB-1: Equipment blank ft bgs: feet below ground surface IPB: iso-propylbenzene (cumene) IPT: p-isopropyltoluene na: not applicable NBB: n-butylbenzene ne: not established on RBC Table NITI: listed as no inhalation toxicity information NPB: n-propylbenzene ODEQ RBCs: State of Oregon Department of Environmental Quality Risked-Based Concentrations ppmv: parts per million per volume SSB: sec-butylbenzene TBB: tert-butylbenzene VOCs: volatile organic compounds</p>													



Table 5
Summary of Groundwater Flow Direction and Gradient Data
United Pacific #5468
Springfield, Oregon
Page 1 of 1

Date	Groundwater Gradient (ft/ft)	Groundwater Flow Direction															
		North	North-northeast	Northeast	East-northeast	East	East-southeast	Southeast	South-southeast	South	South-southwest	Southwest	West-southwest	West	West-northwest	Northwest	North-northwest
03/30/21	0.003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
06/23/21	0.004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
09/22/21	0.004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12/22/21	0.002	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
03/23/22	0.0014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
06/28/22	0.005	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
10/12/22	0.024	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12/20/22	0.004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
04/06/23	0.0077	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
06/29/23	0.012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
09/19/23	0.013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12/13/23	0.003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
03/28/24	0.008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06/12/24	0.005	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
09/24/24	0.007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0	1	1	10	3
Notes: ft/ft: feet per foot																	



CHARTS

CHART 1
Groundwater Elevation Trends
United Pacific #5468
Springfield, Oregon

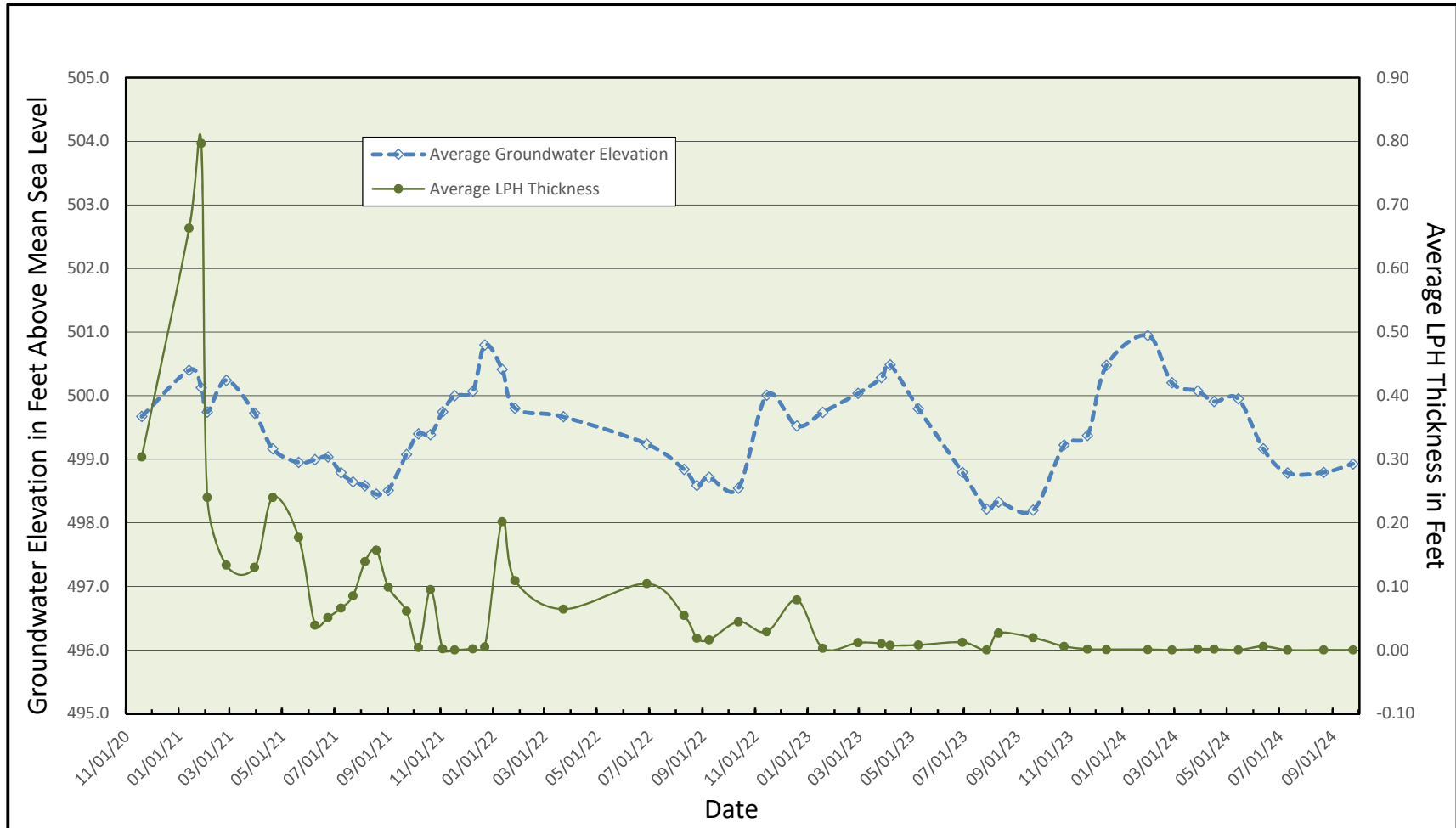


Chart 2
TPH-Gx Concentration Trends
United Pacific #5468
Springfield, Oregon

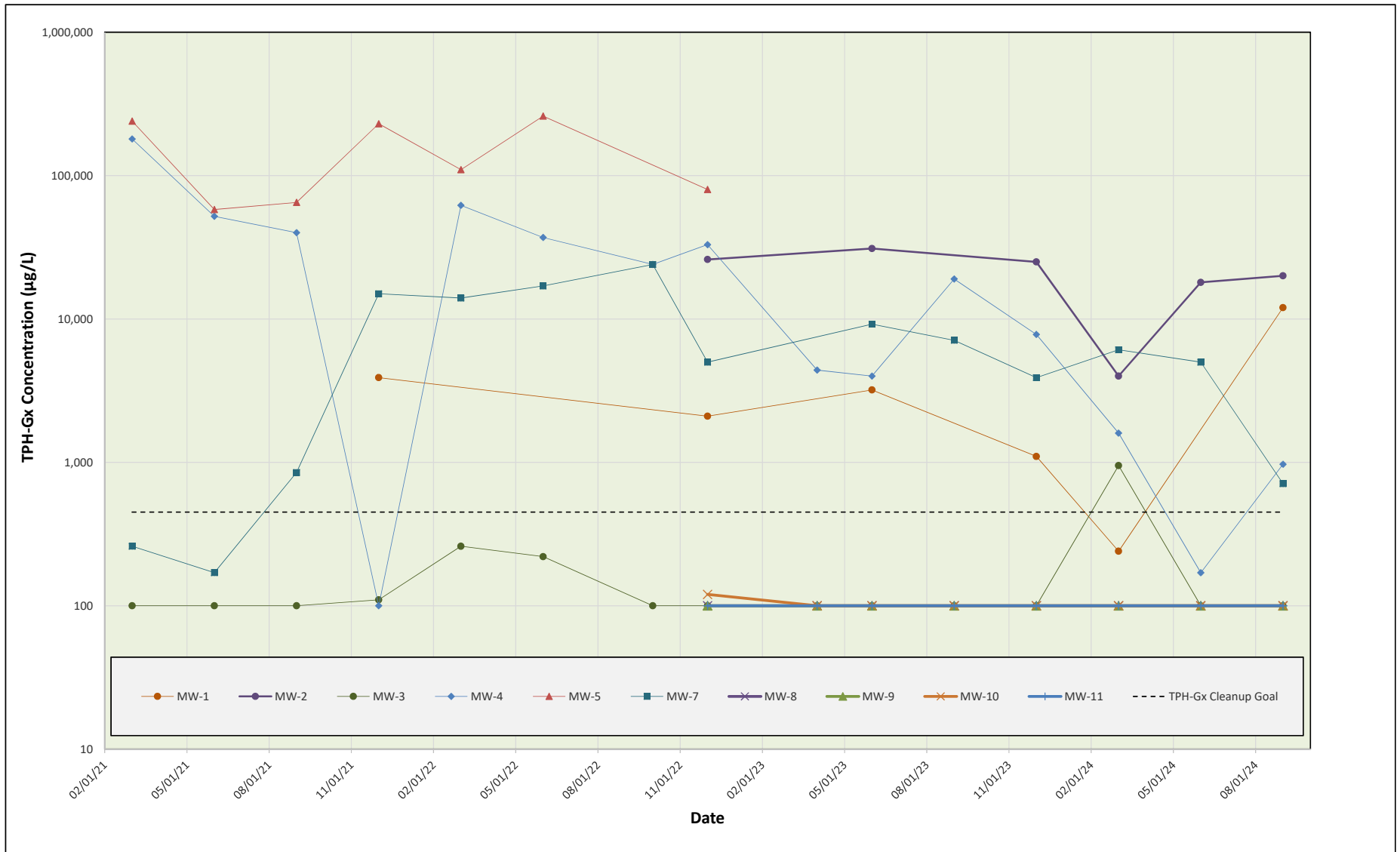
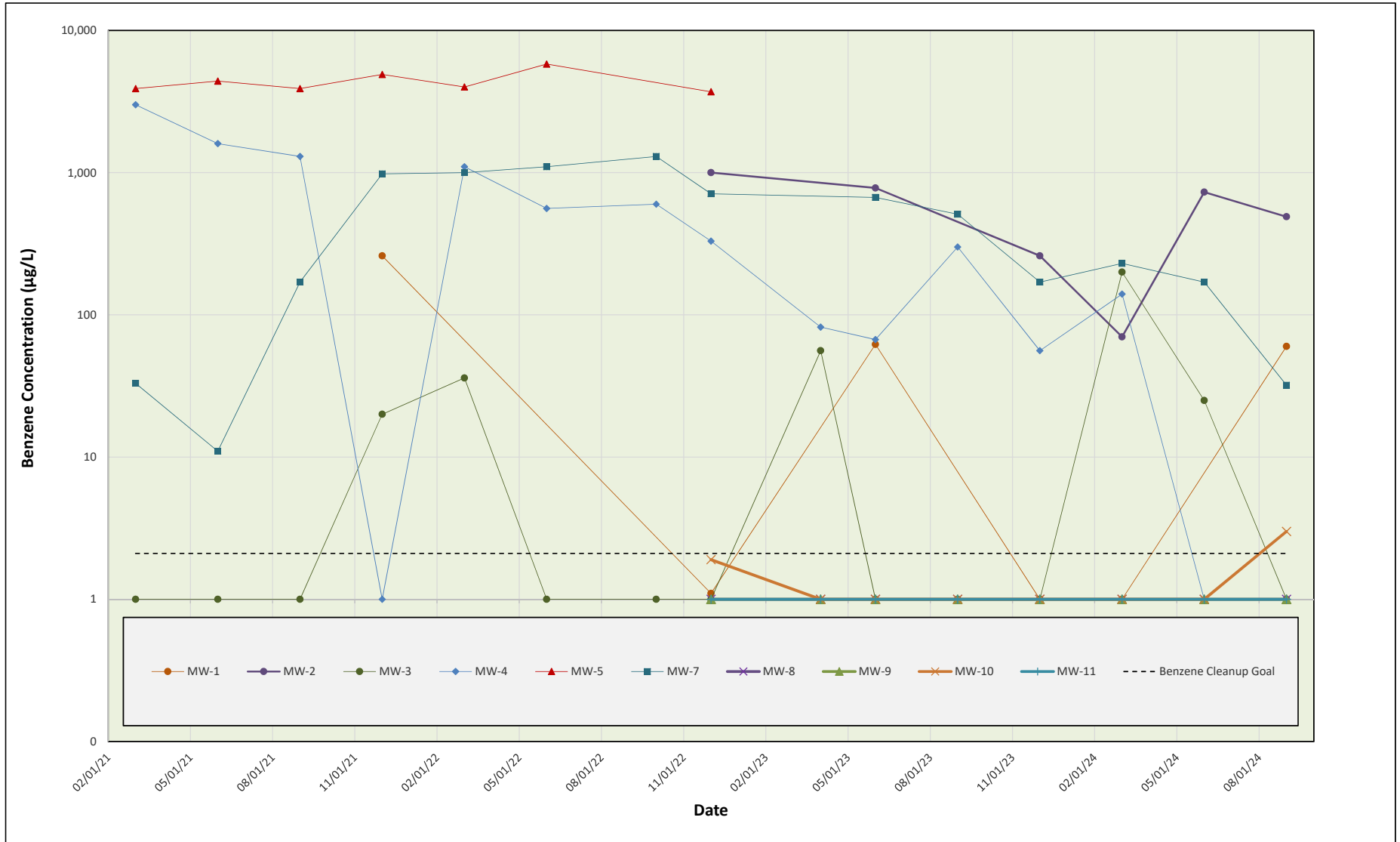


Chart 3
Benzene Concentration Trends
United Pacific #5468
Springfield, Oregon



APPENDIX A
LPH Removal Field Forms

LPH Removal Field Sheet

Project No.: 5468	Springfield
Sampler: Matt Engel	Gauging Date: 11/5/14
Well ID: EW-1R	Well Diameter (in): 4"
Total Well Depth (ft): 17.71	Depth to Water (ft): 11.79
Depth to Free Product: None	Thickness of Free Product (ft): None
to:	Equipment: Product meter

Purge Method: In-well skimmer, disposable bailer
Sampling Method: — Other: —

Purge Start Time: 0928 Flow Rate: — Pump Depth (ft): —

Time	DTP (feet btoc)	DTW	Water Removed	LPH Removed	
0930	N/A	11.79	1.7 gal	0.1 gal	—

←

Did well dewater?: No	Amount of H2O actually evacuated: 1.8 gal
Sampling Time: —	Sampling Date: —
Sample ID: —	Laboratory: —
Analyzed for: —	
Equipment Blank ID: —	Duplicate ID: —

Other Information:
 No water in skimmer, only a small amount of oil.
 Manual bailing produced no other oil.

LPH Removal Field Sheet

Project No.: 5468	Springfield
Sampler: Matt Engel	Gauging Date: 11/5 July/24
Well ID: MW-6	Well Diameter (in): 4"
Total Well Depth (ft): 24.04	Depth to Water (ft): 11.68
Depth to Free Product: None	Thickness of Free Product (ft): None
to: None	Equipment: Product meter

Purge Method: In-well skimmer, disposable bailer

Sampling Method: — Other: —

Purge Start Time: 1003 Flow Rate: — Pump Depth (ft): —

Time	DTP (feet btoc)	DTW	Water Removed	LPH Removed	
1006	N/A	11.68	2.24 gal	0.01 gal	Sheen removed.

—

Did well dewater? : No Amount of H2O actually evacuated: 2.25 gal

Sampling Time: — Sampling Date: —

Sample ID: — Laboratory: —

Analyzed for: —

Equipment Blank ID: — Duplicate ID: —

Other Information:
Not mach in skimmer.

LPH Removal Field Sheet

Project No.: 5468	Springfield
Sampler: Matt Engel	Gauging Date: 11/5/24
Well ID: MW-5	Well Diameter (in): 4"
Total Well Depth (ft): 22.71	Depth to Water (ft): 10.43
Depth to Free Product: None	Thickness of Free Product (ft): None
to: None	Equipment: Product meter

Purge Method: In-well skimmer, disposable bailer
Sampling Method: _____ Other: _____

Purge Start Time: 1030 Flow Rate: _____ Pump Depth (ft): _____

Time	DTP (feet btoc)	DTW	Water Removed	LPH Removed	
1033	N/A	10.43	2.0 gal	None	No product found

Did well dewater?: No	Amount of H2O actually evacuated: 2.0 gal
Sampling Time: _____	Sampling Date: _____
Sample ID: _____	Laboratory: _____
Analyzed for: _____	
Equipment Blank ID: _____	Duplicate ID: _____
Other Information: _____	

WELLHEAD INSPECTION FORM

 PN: 5468

 Date: July 10-11, 2024

 Page: 1 of 1

 Site: Springfield

 Client: United Pacific

 Technician: Matt Engel

Well ID	Well inspected - No corrective action required	Cap non-functional	Lock non-functional	Bolts missing (list quantity)	Tabs stripped (list quantity)	Tabs broken (list quantity)	Annular seal incomplete	Apron damaged	Rim/lid broken	Trip hazard	Below grade	Other (explain in notes)	Well not inspected (explain in notes)	NOTES - please note if cap or lock is replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe is damaged, or any other details not covered by checklist
MW-1	X	-	-	2	-	-	-	-	-	-	-	-	-	
MW-2	X	-	-	1	-	-	-	-	-	-	-	-	-	
MW-3	X	-	-	1	-	-	-	-	-	-	-	-	-	Flooded
MW-4	✓	-	-	-	-	-	-	-	-	-	-	-	-	
MW-5	✓	-	-	-	-	-	-	-	-	-	-	-	-	
MW-6	✓	-	-	-	-	-	-	-	-	-	-	-	-	
MW-7	X	-	-	1	-	-	-	-	-	-	-	-	-	
MW-8	✓	-	-	-	-	-	-	-	-	-	-	-	-	
MW-9	✓	-	-	-	-	-	-	-	-	-	-	-	-	
MW-10	X	-	-	2	-	-	-	-	-	-	-	-	-	
MW-11	X	-	-	1	-	-	-	-	-	-	-	-	-	
EW-1R	✓	-	-	-	-	-	-	-	-	-	-	-	-	
EW-2R	✓	-	-	-	-	-	-	-	-	-	-	-	-	
EW-4	✓	-	-	-	-	-	-	-	-	-	-	-	-	



3rd Quarter

DRUM LOG

Site Name/No.: Springfield Project No.: 5469
 Site Address: 5720 Main St, Springfield, OR

STATUS OF DRUM(S) UPON ARRIVAL				
Date:	<u>10/July/24</u>			
Number of Drums empty:	<u>0</u>			
Number of drums 1/4 full:	<u>1</u>			
Number of drums 1/2 full:	<u>0</u>			
Number of drums 3/4 full:	<u>1</u>			
Total drums onsite:	<u>2</u>			
Are the drums property labeled?	<u>Yes</u>			
Drum ID and contents:	<u>Purge water, LPH</u>			
If any drums are partially or totally filled, what is the first used date?	<u>June 2023, April 2024</u>			

-If free product is added to a drum, the drum must contain at least 20 gallons of water.

-If drum contains free-product, it MUST be steel and appropriately labeled (haz-waste sticker)

STATUS OF DRUM(S) UPON DEPARTURE				
Date:	<u>11/July/24</u>			
Number of Drums empty:	<u>0</u>			
Number of drums 1/4 full:	<u>0</u>			
Number of drums 1/2 full:	<u>1</u>			
Number of drums 3/4 full:	<u>1</u>			
Total drums onsite:	<u>2</u>			
Are the drums property labeled?	<u>Yes</u>			
Drum ID and contents:	<u>Purge water, LPH</u>			
If any drums are partially or totally filled, what is the first used date?	<u>June 2023, April 2024</u>			

LOCATION OF DRUMS
Near dumpsters, N of station

FINAL STATUS				
Number of new drum(s) left onsite this event:	<u>0</u>			
Date of inspection:	<u>11/July/24</u>			
Drums labeled properly?:	<u>Yes</u>			
Technician's initials:	<u>ME</u>			

WELL GAUGING DATA FORM

Site Name: UP #5468
 Project No: PROJ-027409

Location: Springfield, OR
 Date: 8-21-24
 Technician: Lydia Johnson

Well ID	Time	Well Dia (inch)	Sheen / Odor	Depth to Product (feet)	Thickness of Product (feet)	Depth to Water (feet)	Total Well Depth (feet below TOC)	Survey Point (TOC)	NOTES
MW-1	0756	4	—	—	—	13.62	24.38	↓	
MW-2	0752	4	—	—	—	12.29	25.00		
MW-3	0749	4	—	—	—	11.89	26.42		
MW-4	0738	4	—	—	—	10.74	23.80		
MW-5	0836	4	—	—	—	10.33	22.69		
MW-6	0810	4	odor	—	—	12.62	24.09		
MW-7	0734	4	—	—	—	12.81	24.79		
MW-8	0728	4	—	—	—	11.99	18.02		
MW-9	0736	4	—	—	—	10.94	17.29		
MW-10	0732	4	—	—	—	12.52	18.00		
MW-11	0754	2	—	—	—	12.19	19.91		
EW-1R	0822	4	—	—	—	11.78	22.81		
EW-2R	0743	4	—	—	—	11.82	22.85		
EW-4	0747	4	—	—	—	12.42	22.95		
Notes:									

Notes:
 N - No
 Y - Yes
 NA - not applicable
 NM - not measured
 TOC - top of casing



LPH Removal Field Sheet

Project No.: PROJ-027409	United Pacific #5468
Sampler: <i>Lyden Solman</i>	Gauging Date: <i>8-21-24</i>
Well ID: <i>EW-1R</i>	Well Diameter (in): <i>4</i>
Total Well Depth (ft): <i>22.81</i>	Depth to Water (ft): <i>11.73</i>
Depth to Free Product: <i>—</i>	Thickness of Free Product (ft): <i>—</i>
Equipment:	

Purge Method: <i>removed skimmer</i>	Other:
Sampling Method:	Other:

Purge Start Time: 0822 Flow Rate: — Pump Depth (ft): —

Time	DTP (feet btoc)	DTW	Water Removed	LPH Removed	

removed ~ 1 L product

Did well dewater? : <i>no</i>	Amount of H2O actually evacuated:
Sampling Time:	Sampling Date:
Sample ID:	Laboratory:
Analyzed for:	
Equipment Blank ID:	Duplicate ID:
Other Information:	

LPH Removal Field Sheet

Project No.: PROJ-027409	United Pacific #5468
Sampler: <i>Lydia Johnson</i>	Gauging Date: <i>8-21-24</i>
Well ID: <i>MW-6</i>	Well Diameter (in): <i>4</i>
Total Well Depth (ft): <i>24.09</i>	Depth to Water (ft): <i>12.62</i>
Depth to Free Product: <i>—</i>	Thickness of Free Product (ft): <i>—</i>
Equipment:	

Purge Method: <i>removed skimmer</i>	Other:
Sampling Method:	

Purge Start Time: 0810 Flow Rate: Pump Depth (ft):

Time	DTP (feet btoc)	DTW	Water Removed	LPH Removed	

removed ~1 L product

Did well dewater?: <i>No</i>	Amount of H2O actually evacuated:
Sampling Time:	Sampling Date:
Sample ID:	Laboratory:
Analyzed for:	
Equipment Blank ID:	Duplicate ID:
Other Information:	

LPH Removal Field Sheet

Project No.: PROJ-027409	United Pacific #5468
Sampler: <i>Lydia Johnson</i>	Gauging Date: <i>8-21-24</i>
Well ID: <i>NW-5</i>	Well Diameter (in): <i>1.25</i>
Total Well Depth (ft): <i>22.69</i>	Depth to Water (ft): <i>10.33</i>
Depth to Free Product: <i>—</i>	Thickness of Free Product (ft): <i>—</i>
Equipment:	

Purge Method: <i>removed swimmer</i>
Sampling Method: _____ Other: _____

Purge Start Time: *0836* Flow Rate: *—* Pump Depth (ft): *—*

Time	DTP (feet btoc)	DTW	Water Removed	LPH Removed	

removed ~1 L product

Did well dewater?: <i>No</i>	Amount of H2O actually evacuated:
Sampling Time:	Sampling Date:
Sample ID:	Laboratory:
Analyzed for:	
Equipment Blank ID:	Duplicate ID:
Other Information:	

WELLHEAD INSPECTION FORM

PN 240921-41

Date: 8-21-24

Page: 1 of 1

Site: 5720 Main St., Springfield OR

Client: Montrose Eng

Technician: Lydia Johnson

Well ID	Well inspected - No corrective action required	Cap non-functional	Lock non-functional	Bolts missing (list quantity)	Tabs stripped (list quantity)	Tabs broken (list quantity)	Annular seal incomplete	Apron damaged	Rim/lid broken	Trip hazard	Below grade	Other (explain in notes)	Well not inspected (explain in notes)	NOTES - please note if cap or lock is replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe is damaged, or any other details not covered by checklist
MW-1				3										
MW-2	X													
MW-3	X													
MW-4				1										
MW-5	X													
MW-6	X													
MW-7				1										
MW-8	X													
MW-9	X													
MW-10				2										
MW-11	X													
EW-1R	X													
EW-2R	X													
EW-4	X													



SPH or Purge Water Drum Log

Client: MONTROSE ENG.

Site Address: 5720 MAIN ST. SPRINGFIELD, OR.

STATUS OF DRUM(S) UPON ARRIVAL							
Date	06/29/23	8-21-24					
Number of drum(s) empty:	0	0					
Number of drum(s) 1/4 full:	2	2					
Number of drum(s) 1/2 full:	0	0					
Number of drum(s) 3/4 full:	0	0					
Number of drum(s) full:	0	0					
Total drum(s) on site:	2	2					
Are the drum(s) properly labeled?	yes	yes					
Drum ID & Contents:							
If any drum(s) are partially or totally filled, what is the first use date:							

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.

-If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.

-All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE							
Date	06/30/23	8-21-24					
Number of drums empty:	0	0					
Number of drum(s) 1/4 full:	2	3					
Number of drum(s) 1/2 full:	1	0					
Number of drum(s) 3/4 full:	0	0					
Number of drum(s) full:	0	0					
Total drum(s) on site:	3	3					
Are the drum(s) properly labeled?	Yes	yes					
Drum ID & Contents:	BTS purgewater	LPM product					

LOCATION OF DRUM(S)							
Describe location of drum(s): <u>behind station in trash enclosure</u>							

FINAL STATUS							
Number of new drum(s) left on site this event	1	1					
Date of inspection:	06/30/23	8-21-24					
Drum(s) labelled properly:	Yes	yes					
Logged by BTS Field Tech:	FO	LS					
Office reviewed by:							

APPENDIX B

Site Background Information

SITE BACKGROUND

United Pacific #5468
5720 Main Street
Springfield Oregon

Site Assessment and Remediation History

The Site is an active retail fueling station located on the north side of Main Street, approximately 500 feet east of the intersection of Main Street and Bob Straub Parkway. The Site is located at the southern end of a large parking lot for multiple retail stores and restaurants. The property is improved with a convenience store and canopy covering four dispenser islands, each with one fuel dispenser. Gasoline and diesel fuel are both dispensed at the Site.

Three USTs are located on the Site; two contain unleaded gasoline and one contains diesel fuel. The capacities of the USTs are 12,000 gallons each. Note that the UST containing premium grade gasoline, suspected of leaking, was emptied and is not in use; UP plans to replace the entire fuel distribution system at the Site. The regular grade gasoline and diesel USTs are currently active.

A petroleum release at the Site was reported to DEQ in 1989. Various groundwater monitoring wells and remediation wells were installed and a remediation system was operated at the Site. A second fuel release was reported in 1997 and the remediation system operated until 2000. Numerous site assessments and groundwater monitoring events were conducted throughout the years and eventually, in 2012, the Site was granted NFA status by DEQ and the environmental issues at the Site were considered resolved.

On September 21, 2020, UP notified the DEQ of a failure of the UST containing premium gasoline at the Site and that the tank had been emptied and taken offline. On September 22, 2020, UP contacted Montrose to relay concerns regarding one of the USTs at the Site; the continuous statistical leak detection (CSLD) system had indicated a failure of the UST containing premium gasoline. On September 23, 2020, a *UST Petroleum Release Form* was submitted to the DEQ to further document the release. On September 24, 2020, Montrose performed a visit to inspect the Site and review recent fuel inventory records (kept in the convenience store office). Based on conversations with the station manager and a review of fuel inventory documents, problems with the fuel inventory were first observed on or around August 13, 2020. On September 15, 2020, the station stopped dispensing premium gasoline and over the next several days, physical measurements of the fuel level in the premium UST indicated that gasoline was exiting the system.

On September 19, 2020, approximately 3,914 gallons of gasoline was removed from the premium UST and on September 23, 2020, the fuel level was pumped down to the lowest achievable level and the fuel was transported offsite for disposal.

On October 13, 2020, Montrose prepared and submitted an Initial (Twenty Day) Report Form for UST Cleanup Projects to the DEQ and DEQ assigned the following leaking underground storage tank (LUST) number to the Site: 20-20-0844. Note, the Site had previously been identified by the following underground storage tank (UST) number: 791.



In November 2020, Montrose performed an initial site assessment which included advancing six soil borings (SB-1 through SB-6) using direct-push drilling techniques and the installation of three LPH extraction wells (EW-1 through EW-3) using roto-sonic drilling techniques. Visible LPH was observed during the advancement of Borings SB-2 through SB-5 and therefore, soil samples were only collected from Borings SB-1 and SB-6. Wells EW-1 through EW-3 were installed in an effort to access and recover the LPH observed during the initial direct-push drilling. Complete details of the work were reported in the *Initial Site Assessment and Interim Remedial Action Report*, dated December 15, 2021. Three soil samples collected contained COCs at concentrations exceeding the DEQ's RBCs for the leaching to groundwater scenario.

During January and February 2021, Montrose performed four separate LPH removal events, during which LPH and impacted groundwater were removed from Wells EW-1 through EW-3. LPH was recovered using various techniques including manual bailing and the use of a vacuum truck. On February 25, 2021, passive down-hole product skimmers were installed in Wells EW-2 and EW-3 to enhance recovery of LPH.

In February and March 2021, Montrose conducted additional site assessment work at the Site which included a vapor intrusion (VI) assessment, utility corridor assessment, and well installation activities. The VI assessment consisted of the collection of two sub-slab soil gas samples (SVP-1 and SVP-2), one indoor ambient air sample, and one outdoor ambient air sample. Additionally, seven groundwater monitoring wells (MW-1 through MW-7) were installed at the Site. Results of the VI assessment indicated that vapors from the liquid phase and dissolved phase hydrocarbon plumes beneath the Site did not currently pose a threat to either indoor or outdoor air. Soil samples collected from five of the seven wells contained COCs at concentrations exceeding DEQ's RBCs for the leaching to groundwater scenario. Following well installation, quarterly groundwater monitoring was initiated at the Site. Initial groundwater monitoring results indicated the presence of LPH or elevated COC concentrations in a majority of the wells. Complete details were reported in the *Additional Site Assessment, Well Installation, Vapor Intrusion, and Groundwater Monitoring Report*, dated June 7, 2021.

In September 2021, additional sub-slab soil vapor and indoor air and ambient air sampling was conducted. The results were reported in the *Third Quarter 2021 Air Monitoring Report*, dated November 16, 2021. Quarterly groundwater monitoring, continued VI assessment and LPH removal efforts are ongoing.

Montrose submitted the *Workplan for Additional Soil and Groundwater Investigation*, dated October 12, 2021, which proposed the installation of up to five additional groundwater monitoring wells, one soil vapor probe, continued vapor intrusion assessment, the collection of additional vapor and ambient air samples, and the completion of a preliminary site conceptual model. The DEQ concurred with the Workplan in their letter dated December 6, 2021.

In December 2021, additional sub-slab soil vapor and indoor air and ambient air sampling was conducted with the results presented in the *Fourth Quarter 2021 Air Monitoring Report*, dated March 10, 2022. The preliminary site conceptual model was completed by Montrose on February 1, 2022, and was sent to the DEQ and UP.



In February 2022, extraction wells EW-1, EW-2 and EW-3, located adjacent to the UST cavity, were decommissioned in advance of planned replacement of the fuel distribution system at the site. The field activities were summarized in the *Well Decommissioning Report*, dated April 25, 2022.

Beginning in March 2022, the fuel distribution system at the Site was replaced by Anderson Environmental Contracting of Kelso, Washington. Following removal of the old USTs, approximately 660 tons of petroleum contaminated soil (PCS) was over-excavated from the UST pit and exported to Coffin Butte Landfill, in Corvallis, Oregon. In addition to soil removal, approximately 47,000 gallons of UST pit water was pumped and disposed of to facilitate the installation of the two new USTs; one 20,000-gallon tank containing diesel and one 20,000-gallon dual-compartment UST containing 12,000-gallons of unleaded gasoline and 8,000-gallons of premium gasoline. Montrose conducted the decommissioning soil sampling as required by Oregon state law. Several soil samples collected from beneath former product lines contained COCs at concentrations exceeding applicable CULs. Montrose directed the over-excavation of soil from those areas and collected confirmation soil samples to show that all PCS was removed. Installation of the new fuel distribution system and rehabilitation of the Site was complete by June 30, 2022.

In September 2022, Montrose conducted drilling activities at the Site which included the installation of three replacement wells identified as EW-1R, EW-2R, and EW-4. The three wells serve as replacements for Wells EW-1, EW-2, and EW-3 that were formally decommissioned in February 2022, prior to the replacement of the fuel distribution system.

In November 2022, Montrose conducted additional assessment activities at the Site which included the installation of four groundwater monitoring wells at locations which served to further delineate hydrocarbon impacts beneath the site and neighboring properties. The wells were identified as MW-8 through MW-11. A fifth well was planned but was ultimately not installed due to time constraints for the project. Soil samples were collected from each of the borings and analyzed for fuel constituents. COCs were not detected at concentrations exceeding applicable CULs. Complete results were presented in the *Additional Site Assessment and Fourth Quarter 2022 Groundwater Monitoring Report*, dated March 2, 2023.

In March 2023, a limited step pumping test was performed in order to determine certain aquifer parameters and to acquire field data needed to assist in the design of a long-term remedial plan for the Site. Results of the test were presented in the *Aquifer Pumping Test Report*, dated May 31, 2023. The pumping test was performed in general accordance with *Workplan for Remedial Pilot Testing*, dated December 5, 2022.

Quarterly groundwater monitoring and periodic LPH removal efforts are ongoing at the Site while remedial strategies are being evaluated.



APPENDIX C

Laboratory Analytical Report



Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

Phone (360) 352-2110 • libbyenv@gmail.com

October 03, 2024

Laura Skow
Montrose Environmental Group, Inc.
4150 B Place NW, Suite 106
Auburn, WA 98001

RE: 5468, Springfield
Work Order Number: L24I092

Enclosed are the results of analyses for samples received by our laboratory on 9/25/2024.

Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please feel free to contact us. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry Chilcutt
Senior Chemist

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
 Olympia, WA 98506
 Ph: 360-352-2110
 Fax: 360-352-4154

Date: _____ Page: 1 of 1

Client: **Montrose Environmental**

Project Manager: **Laura Skow**

Address: **1631 E. Saint Andrew Place**

Project Name: **5468, Springfield**

City: **Santa Ana** State: **CA** Zip: **92705**

Location: **5720 Main Street** City, State: **Springfield, WA**

Phone: **(714) 743-7855 / (714) 919-6533** Fax: _____


Collector: **Eduardo Rivera** Date of Collection: **9/24/24**

Client Project # **PROJ-027409 / PO#072380**

Email: lskow@montrose-env.com

Page 2 of 30

Sample Number	Date	Time	Sample Type	Container Type	Analytes												Field Notes	
					VOC 8260 - MTCA	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	PCB-Dx / Dx	MTCA 5 Metals	RCRA 8 Metals	PAH 8270	Semi Vol 8270	Lead			
1 MW-9	9/24/24	0911	GW	3 VOAs, Poly	X	X											X	
2 MW-8		0939	GW	3 VOAs, Poly	X	X											X	
3 MW-10		1000	GW	3 VOAs, Poly	X	X											X	
4 MW-11		1043	GW	3 VOAs, Poly	X	X											X	
5 MW-3		1145	GW	3 VOAs, Poly	X	X											X	
6 MW-4		1208	GW	3 VOAs, Poly	X	X											X	
7 MW-7		1019	GW	3 VOAs, Poly	X	X											X	
8 MW-2		1235	GW	3 VOAs, Poly	X	X											X	
9 EW-2R		1302	GW	3 VOAs, Poly	X	X											X	
10 EW-4		1325	GW	3 VOAs, Poly	X	X											X	
11 EB-1		1450	GW	3 VOAs, Poly	X	X											X	
12 EB-2			GW	3 VOAs, Poly	X	X											X	<i>Per Laura via email</i>
13 DUP-1	na	na	GW	3 VOAs, Poly	X	X											X	
14 Trip Blank	na	na	GW	1 VOA	X													
15 MW-1	9/24/24	1355	GW	3 VOAs, Poly	X	X											X	
16																		
17																		

Relinquished by: 	Date / Time: 9/25/24 B3	Received by: E. Santos	Date / Time: 9/25/24 1335	Sample Receipt Good Condition? Y N Cooler Temp. °C Sample Temp. °C Total Number of Containers	Remarks:
Relinquished by:	Date / Time:	Received by:	Date / Time:		
Relinquished by:	Date / Time:	Received by:	Date / Time:		
Relinquished by:	Date / Time:	Received by:	Date / Time:		

AT: 1-Day 2-Day 5-DA



Libby Environmental, Inc.

Montrose Environmental Group, Inc.
4150 B Place NW, Suite 106
Auburn, WA 98001

Project: 5468, Springfield
Project Number: 027409
Project Manager: Laura Skow

City/State: Springfield, WA
Work Order: L24I092
Reported: 10/03/2024 14:04

Notes and Definitions

Item	Definition
R	High Relative Percent Difference observed.
S4	Outlying surrogate recovery(ies) observed.
RL	Reporting Limit
ND	Analyte NOT DETECTED at or above the reporting limit
DET	Analyte DETECTED at or above the reporting limit
Qual	Qualifier
	All results reported on an "as received" basis unless indicated by "Dry"
RPD	Relative Percent Difference
%REC	Percent Recovery
Parent	Sample that was matrix spiked or duplicated

Work Order Sample Summary

Lab ID	Sample	Matrix	Date Sampled	Date Received
L24I092-01	MW-9	Water	09/24/2024	09/25/2024
L24I092-02	MW-8	Water	09/24/2024	09/25/2024
L24I092-03	MW-10	Water	09/24/2024	09/25/2024
L24I092-04	MW-11	Water	09/24/2024	09/25/2024
L24I092-05	MW-3	Water	09/24/2024	09/25/2024
L24I092-06	MW-4	Water	09/24/2024	09/25/2024
L24I092-07	MW-7	Water	09/24/2024	09/25/2024
L24I092-08	MW-2	Water	09/24/2024	09/25/2024
L24I092-09	EW-2R	Water	09/24/2024	09/25/2024
L24I092-10	EW-4	Water	09/24/2024	09/25/2024
L24I092-11	EB-1	Water	09/24/2024	09/25/2024
L24I092-12	EB-2	Water	09/24/2024	09/25/2024
L24I092-13	DUP-1	Water	09/24/2024	09/25/2024
L24I092-14	Trip Blank	Water	09/24/2024	09/25/2024
L24I092-15	MW-1	Water	09/24/2024	09/25/2024



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Auburn, WA 98001

Project: 5468, Springfield
Project Number: 027409
Project Manager: Laura Skow

City/State: Springfield, WA
Work Order: L24I092
Reported: 10/03/2024 14:04

Libby Environmental Sample Detection Summary

Analyte	Result	Qual	Units	RL	Method
Sample: MW-10			Lab#: L24I092-03		
Benzene	3.0		ug/L	1.0	8260D
Ethylbenzene	2.9		ug/L	1.0	8260D
Total Xylenes	3.0		ug/L	2.0	8260D
Sample: MW-4			Lab#: L24I092-06		
Gasoline	970		ug/L	100	NWTPH-Gx
Ethylbenzene	8.7		ug/L	1.0	8260D
Total Xylenes	290		ug/L	2.0	8260D
Naphthalene	11		ug/L	5.0	8260D
2-Methylnaphthalene	5.8		ug/L	5.0	8260D
Sample: MW-7			Lab#: L24I092-07		
Gasoline	710		ug/L	100	NWTPH-Gx
Benzene	32		ug/L	1.0	8260D
Ethylbenzene	17		ug/L	1.0	8260D
Total Xylenes	68		ug/L	2.0	8260D
Naphthalene	12		ug/L	5.0	8260D
1-Methylnaphthalene	6.8		ug/L	5.0	8260D
Sample: MW-2			Lab#: L24I092-08		
Gasoline	20000		ug/L	2500	NWTPH-Gx
Benzene	490		ug/L	25	8260D
Toluene	2500		ug/L	50	8260D
Ethylbenzene	630		ug/L	25	8260D
Total Xylenes	3500		ug/L	50	8260D
Naphthalene	91		ug/L	5.0	8260D
2-Methylnaphthalene	51		ug/L	5.0	8260D
1-Methylnaphthalene	29		ug/L	5.0	8260D



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Work Order: L24I092
Reported: 10/03/2024 14:04

Libby Environmental Sample Detection Summary (Continued)

Analyte	Result	Qual	Units	RL	Method
Sample: EW-2R			Lab#: L24I092-09		
Gasoline	13000		ug/L	2500	NWTPH-Gx
Benzene	300		ug/L	25	8260D
Toluene	2300		ug/L	50	8260D
Ethylbenzene	330		ug/L	25	8260D
Total Xylenes	2100		ug/L	50	8260D
Naphthalene	53		ug/L	5.0	8260D
2-Methylnaphthalene	17		ug/L	5.0	8260D
1-Methylnaphthalene	11		ug/L	5.0	8260D
Sample: EW-4			Lab#: L24I092-10		
Gasoline	20000		ug/L	2500	NWTPH-Gx
Benzene	960		ug/L	25	8260D
Toluene	2500		ug/L	50	8260D
Ethylbenzene	380		ug/L	25	8260D
Total Xylenes	3400		ug/L	50	8260D
Naphthalene	96		ug/L	5.0	8260D
2-Methylnaphthalene	54		ug/L	5.0	8260D
1-Methylnaphthalene	32		ug/L	5.0	8260D
Sample: EB-1			Lab#: L24I092-11		
Toluene	2.7		ug/L	2.0	8260D
Total Xylenes	12		ug/L	2.0	8260D
Sample: DUP-1			Lab#: L24I092-13		
Gasoline	8000		ug/L	1000	NWTPH-Gx
Benzene	92		ug/L	1.0	8260D
Toluene	250		ug/L	20	8260D
Ethylbenzene	170		ug/L	1.0	8260D
Total Xylenes	910		ug/L	20	8260D
Naphthalene	45		ug/L	5.0	8260D
2-Methylnaphthalene	33		ug/L	5.0	8260D
1-Methylnaphthalene	23		ug/L	5.0	8260D



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Libby Environmental Sample Detection Summary (Continued)

Analyte	Result	Qual	Units	RL	Method
Sample: MW-1				Lab#: L24I092-15	
Gasoline	12000		ug/L	1000	NWTPH-Gx
Benzene	60		ug/L	1.0	8260D
Toluene	240		ug/L	20	8260D
Ethylbenzene	170		ug/L	1.0	8260D
Total Xylenes	1100		ug/L	20	8260D
Naphthalene	52		ug/L	5.0	8260D
2-Methylnaphthalene	55		ug/L	5.0	8260D
1-Methylnaphthalene	37		ug/L	5.0	8260D

Note: If no entry is made, then no target compounds were detected.



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Project: 5468, Springfield
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City/State: Springfield, WA
Work Order: L24I092
Reported: 10/03/2024 14:04

Sample Results

Client Sample ID: MW-9

Lab ID: L24I092-01 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	ND		1.0	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	ND		2.0	ug/L	09/26/2024	PB
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	ND		1.0	ug/L	09/26/2024	PB
Total Xylenes	ND		2.0	ug/L	09/26/2024	PB
Naphthalene	ND		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
<i>Surrogate: Dibromofluoromethane</i>	<i>134%</i>		<i>49.6-175</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>126%</i>		<i>31.7-194</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: Toluene-d8</i>	<i>124%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>96.9%</i>		<i>50.8-121</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		100	ug/L	09/26/2024	PB
<i>Surrogate: Toluene-d8</i>	<i>124%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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Work Order: L24I092
Reported: 10/03/2024 14:04

Sample Results (Continued)

Client Sample ID: MW-8

Lab ID: L24I092-02 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	ND		1.0	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	ND		2.0	ug/L	09/26/2024	PB
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	ND		1.0	ug/L	09/26/2024	PB
Total Xylenes	ND		2.0	ug/L	09/26/2024	PB
Naphthalene	ND		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
<i>Surrogate: Dibromofluoromethane</i>	<i>124%</i>		<i>49.6-175</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>122%</i>		<i>31.7-194</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: Toluene-d8</i>	<i>121%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.3%</i>		<i>50.8-121</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		100	ug/L	09/26/2024	PB
<i>Surrogate: Toluene-d8</i>	<i>121%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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Work Order: L24I092
Reported: 10/03/2024 14:04

Sample Results (Continued)

Client Sample ID: MW-10

Lab ID: L24I092-03 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	3.0		1.0	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	ND		2.0	ug/L	09/26/2024	PB
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	2.9		1.0	ug/L	09/26/2024	PB
Total Xylenes	3.0		2.0	ug/L	09/26/2024	PB
Naphthalene	ND		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
<i>Surrogate: Dibromofluoromethane</i>	<i>106%</i>		<i>49.6-175</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>102%</i>		<i>31.7-194</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: Toluene-d8</i>	<i>101%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101%</i>		<i>50.8-121</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		100	ug/L	09/26/2024	PB
<i>Surrogate: Toluene-d8</i>	<i>101%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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Auburn, WA 98001

Project: 5468, Springfield
Project Number: 027409
Project Manager: Laura Skow

City/State: Springfield, WA
Work Order: L24I092
Reported: 10/03/2024 14:04

Sample Results (Continued)

Client Sample ID: MW-11

Lab ID: L24I092-04 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	ND		1.0	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	ND		2.0	ug/L	09/26/2024	PB
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	ND		1.0	ug/L	09/26/2024	PB
Total Xylenes	ND		2.0	ug/L	09/26/2024	PB
Naphthalene	ND		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
<i>Surrogate: Dibromofluoromethane</i>	<i>106%</i>		<i>49.6-175</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>105%</i>		<i>31.7-194</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: Toluene-d8</i>	<i>103%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>102%</i>		<i>50.8-121</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		100	ug/L	09/26/2024	PB
<i>Surrogate: Toluene-d8</i>	<i>103%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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City/State: Springfield, WA
Work Order: L24I092
Reported: 10/03/2024 14:04

Sample Results (Continued)

Client Sample ID: MW-3

Lab ID: L24I092-05 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	ND		1.0	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	ND		2.0	ug/L	09/26/2024	PB
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	ND		1.0	ug/L	09/26/2024	PB
Total Xylenes	ND		2.0	ug/L	09/26/2024	PB
Naphthalene	ND		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
<i>Surrogate: Dibromofluoromethane</i>	<i>133%</i>		<i>49.6-175</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>128%</i>		<i>31.7-194</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: Toluene-d8</i>	<i>127%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.8%</i>		<i>50.8-121</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		100	ug/L	09/26/2024	PB
<i>Surrogate: Toluene-d8</i>	<i>127%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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Reported: 10/03/2024 14:04

Sample Results (Continued)

Client Sample ID: MW-4

Lab ID: L24I092-06 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	ND		1.0	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	ND		2.0	ug/L	09/26/2024	PB
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	8.7		1.0	ug/L	09/26/2024	PB
Total Xylenes	290		2.0	ug/L	09/26/2024	PB
Naphthalene	11		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	5.8		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
<i>Surrogate: Dibromofluoromethane</i>	<i>128%</i>		<i>49.6-175</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>107%</i>		<i>31.7-194</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: Toluene-d8</i>	<i>125%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>119%</i>		<i>50.8-121</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	970		100	ug/L	09/26/2024	PB
<i>Surrogate: Toluene-d8</i>	<i>125%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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Work Order: L24I092
Reported: 10/03/2024 14:04

Sample Results (Continued)

Client Sample ID: MW-7

Lab ID: L24I092-07 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	32		1.0	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	ND		2.0	ug/L	09/26/2024	PB
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	17		1.0	ug/L	09/26/2024	PB
Total Xylenes	68		2.0	ug/L	09/26/2024	PB
Naphthalene	12		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	ND		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	6.8		5.0	ug/L	09/26/2024	PB
<i>Surrogate: Dibromofluoromethane</i>	<i>130%</i>		<i>49.6-175</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>115%</i>		<i>31.7-194</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: Toluene-d8</i>	<i>126%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>121%</i>		<i>50.8-121</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	710		100	ug/L	09/26/2024	PB
<i>Surrogate: Toluene-d8</i>	<i>126%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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Sample Results (Continued)

Client Sample ID: MW-2

Lab ID: L24I092-08 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	490		25	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	2500		50	ug/L	09/26/2024	PB
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	630		25	ug/L	09/26/2024	PB
Total Xylenes	3500		50	ug/L	09/26/2024	PB
Naphthalene	91		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	51		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	29		5.0	ug/L	09/26/2024	PB
Surrogate: Dibromofluoromethane	122%		49.6-175		09/26/2024	PB
Surrogate: 1,2-Dichloroethane-d4	124%		31.7-194		09/26/2024	PB
Surrogate: Toluene-d8	143%	S4	52.9-135		09/26/2024	PB
Surrogate: 4-Bromofluorobenzene	133%	S4	50.8-121		09/26/2024	PB
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	20000		2500	ug/L	09/26/2024	PB
Surrogate: Toluene-d8	131%		52.9-135		09/26/2024	PB
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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Sample Results (Continued)

Client Sample ID: EW-2R

Lab ID: L24I092-09 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	300		25	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	2300		50	ug/L	09/26/2024	PB
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	330		25	ug/L	09/26/2024	PB
Total Xylenes	2100		50	ug/L	09/26/2024	PB
Naphthalene	53		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	17		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	11		5.0	ug/L	09/26/2024	PB
Surrogate: Dibromofluoromethane	125%		49.6-175		09/26/2024	PB
Surrogate: 1,2-Dichloroethane-d4	116%		31.7-194		09/26/2024	PB
Surrogate: Toluene-d8	132%		52.9-135		09/26/2024	PB
Surrogate: 4-Bromofluorobenzene	123%	S4	50.8-121		09/26/2024	PB
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	13000		2500	ug/L	09/26/2024	PB
Surrogate: Toluene-d8	129%		52.9-135		09/26/2024	PB
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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Sample Results (Continued)

Client Sample ID: EW-4

Lab ID: L24I092-10 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	960		25	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	2500		50	ug/L	09/26/2024	PB
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	380		25	ug/L	09/26/2024	PB
Total Xylenes	3400		50	ug/L	09/26/2024	PB
Naphthalene	96		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	54		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	32		5.0	ug/L	09/26/2024	PB
<i>Surrogate: Dibromofluoromethane</i>	<i>134%</i>		<i>49.6-175</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>126%</i>		<i>31.7-194</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: Toluene-d8</i>	<i>129%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>119%</i>		<i>50.8-121</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	20000		2500	ug/L	09/26/2024	PB
<i>Surrogate: Toluene-d8</i>	<i>129%</i>		<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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Sample Results (Continued)

Client Sample ID: EB-1

Lab ID: L24I092-11 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/27/2024	CA
Benzene	ND		1.0	ug/L	09/27/2024	CA
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/27/2024	CA
Toluene	2.7		2.0	ug/L	09/27/2024	CA
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/27/2024	CA
Ethylbenzene	ND		1.0	ug/L	09/27/2024	CA
Total Xylenes	12		2.0	ug/L	09/27/2024	CA
Naphthalene	ND		5.0	ug/L	09/27/2024	CA
2-Methylnaphthalene	ND		5.0	ug/L	09/27/2024	CA
1-Methylnaphthalene	ND		5.0	ug/L	09/27/2024	CA
<i>Surrogate: Dibromofluoromethane</i>	<i>128%</i>		<i>49.6-175</i>		<i>09/27/2024</i>	<i>CA</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>126%</i>		<i>31.7-194</i>		<i>09/27/2024</i>	<i>CA</i>
<i>Surrogate: Toluene-d8</i>	<i>127%</i>		<i>52.9-135</i>		<i>09/27/2024</i>	<i>CA</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>110%</i>		<i>50.8-121</i>		<i>09/27/2024</i>	<i>CA</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	ND		100	ug/L	09/27/2024	CA
<i>Surrogate: Toluene-d8</i>	<i>127%</i>		<i>52.9-135</i>		<i>09/27/2024</i>	<i>CA</i>
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



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Sample Results (Continued)

Client Sample ID: DUP-1

Lab ID: L24I092-13 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	92		1.0	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	250		20	ug/L	09/27/2024	CA
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	170		1.0	ug/L	09/26/2024	PB
Total Xylenes	910		20	ug/L	09/27/2024	CA
Naphthalene	45		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	33		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	23		5.0	ug/L	09/26/2024	PB
Surrogate: Dibromofluoromethane	117%		49.6-175		09/26/2024	PB
Surrogate: 1,2-Dichloroethane-d4	105%		31.7-194		09/26/2024	PB
Surrogate: Toluene-d8	135%		52.9-135		09/26/2024	PB
Surrogate: 4-Bromofluorobenzene	122%	S4	50.8-121		09/26/2024	PB
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	8000		1000	ug/L	09/27/2024	CA
Surrogate: Toluene-d8	125%		52.9-135		09/27/2024	CA
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/02/2024	AA



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Sample Results (Continued)

Client Sample ID: Trip Blank

Lab ID: L24I092-14 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/27/2024	CA
Benzene	ND		1.0	ug/L	09/27/2024	CA
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/27/2024	CA
Toluene	ND		2.0	ug/L	09/27/2024	CA
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/27/2024	CA
Ethylbenzene	ND		1.0	ug/L	09/27/2024	CA
Total Xylenes	ND		2.0	ug/L	09/27/2024	CA
Naphthalene	ND		5.0	ug/L	09/27/2024	CA
2-Methylnaphthalene	ND		5.0	ug/L	09/27/2024	CA
1-Methylnaphthalene	ND		5.0	ug/L	09/27/2024	CA
<i>Surrogate: Dibromofluoromethane</i>	<i>136%</i>		<i>49.6-175</i>		<i>09/27/2024</i>	<i>CA</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>119%</i>		<i>31.7-194</i>		<i>09/27/2024</i>	<i>CA</i>
<i>Surrogate: Toluene-d8</i>	<i>133%</i>		<i>52.9-135</i>		<i>09/27/2024</i>	<i>CA</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>99.7%</i>		<i>50.8-121</i>		<i>09/27/2024</i>	<i>CA</i>



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Sample Results (Continued)

Client Sample ID: MW-1

Lab ID: L24I092-15 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L	09/26/2024	PB
Benzene	60		1.0	ug/L	09/26/2024	PB
1,2-Dichloroethane (EDC)	ND		1.0	ug/L	09/26/2024	PB
Toluene	240		20	ug/L	09/27/2024	CA
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L	09/26/2024	PB
Ethylbenzene	170		1.0	ug/L	09/26/2024	PB
Total Xylenes	1100		20	ug/L	09/27/2024	CA
Naphthalene	52		5.0	ug/L	09/26/2024	PB
2-Methylnaphthalene	55		5.0	ug/L	09/26/2024	PB
1-Methylnaphthalene	37		5.0	ug/L	09/26/2024	PB
<i>Surrogate: Dibromofluoromethane</i>	<i>117%</i>		<i>49.6-175</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>100%</i>		<i>31.7-194</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: Toluene-d8</i>	<i>138%</i>	<i>S4</i>	<i>52.9-135</i>		<i>09/26/2024</i>	<i>PB</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>126%</i>	<i>S4</i>	<i>50.8-121</i>		<i>09/26/2024</i>	<i>PB</i>
<u>Gasoline by Method NWTPH-Gx</u>						
Gasoline	12000		1000	ug/L	09/27/2024	CA
<i>Surrogate: Toluene-d8</i>	<i>132%</i>		<i>52.9-135</i>		<i>09/27/2024</i>	<i>CA</i>
<u>Total Metals by EPA Method 7010</u>						
Lead	ND		5.0	ug/L	10/01/2024	AA



Libby Environmental, Inc.

Montrose Environmental Group, Inc.
4150 B Place NW, Suite 106
Auburn, WA 98001

Project: 5468, Springfield
Project Number: 027409
Project Manager: Laura Skow

City/State: Springfield, WA
Work Order: L24I092
Reported: 10/03/2024 14:04

Quality Control

Volatile Organic Compounds by EPA Method 8260D

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: **BYI0127 - VOA**

Blank (BYI0127-BLK1)

Prepared & Analyzed: 9/25/2024

Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L						
Benzene	ND		1.0	ug/L						
1,2-Dichloroethane (EDC)	ND		1.0	ug/L						
Toluene	ND		2.0	ug/L						
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L						
Ethylbenzene	ND		1.0	ug/L						
Total Xylenes	ND		2.0	ug/L						
Naphthalene	ND		5.0	ug/L						
2-Methylnaphthalene	ND		5.0	ug/L						
1-Methylnaphthalene	ND		5.0	ug/L						
Surrogate: Dibromofluoromethane			26.9	ug/L	20.0		134	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			25.9	ug/L	20.0		130	31.7-194		
Surrogate: Toluene-d8			26.3	ug/L	20.0		131	52.9-135		
Surrogate: 4-Bromofluorobenzene			18.9	ug/L	20.0		94.7	50.8-121		

LCS (BYI0127-BS1)

Prepared & Analyzed: 9/25/2024

Methyl tert-Butyl Ether (MTBE)	5.36		5.0	ug/L	5.00		107	29.6-190		
Benzene	4.00		1.0	ug/L	5.00		80.1	54.1-136		
1,2-Dichloroethane (EDC)	4.67		1.0	ug/L	5.00		93.4	52.8-185		
Toluene	4.39		2.0	ug/L	5.00		87.8	53.3-135		
1,2-Dibromoethane (EDB) (SIM)	5.07		0.010	ug/L	5.00		101	34.5-141		
Ethylbenzene	4.62		1.0	ug/L	5.00		92.4	51.1-125		
Total Xylenes	13.2		2.0	ug/L	15.0		88.3	47.2-123		
Naphthalene	4.87		5.0	ug/L	5.00		97.5	10-220		
2-Methylnaphthalene	4.54		5.0	ug/L				16.1-204		
1-Methylnaphthalene	5.11		5.0	ug/L				10-205		
Surrogate: Dibromofluoromethane			25.7	ug/L	20.0		129	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			20.8	ug/L	20.0		104	31.7-194		
Surrogate: Toluene-d8			24.3	ug/L	20.0		121	52.9-135		
Surrogate: 4-Bromofluorobenzene			22.8	ug/L	20.0		114	50.8-121		

Duplicate (BYI0127-DUP1)

Parent: L24I091-01

Prepared & Analyzed: 9/25/2024

Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L		ND				35
Benzene	ND		1.0	ug/L		ND				35
1,2-Dichloroethane (EDC)	ND		1.0	ug/L		ND				35
Toluene	ND		2.0	ug/L		ND				35
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L		ND				35
Ethylbenzene	ND		1.0	ug/L		ND				35
Total Xylenes	ND		2.0	ug/L		ND				35
Naphthalene	ND		5.0	ug/L		ND				35
2-Methylnaphthalene	ND		5.0	ug/L		ND				35
1-Methylnaphthalene	ND		5.0	ug/L		ND				35
Surrogate: Dibromofluoromethane			26.1	ug/L	20.0		130	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			26.1	ug/L	20.0		130	31.7-194		
Surrogate: Toluene-d8			25.6	ug/L	20.0		128	52.9-135		
Surrogate: 4-Bromofluorobenzene			19.2	ug/L	20.0		96.2	50.8-121		



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Work Order: L24I092
Reported: 10/03/2024 14:04

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Duplicate (BYI0127-DUP2)		Parent: L24I091-02			Prepared & Analyzed: 9/25/2024					
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L		ND				35
Benzene	ND		1.0	ug/L		ND				35
1,2-Dichloroethane (EDC)	ND		1.0	ug/L		ND				35
Toluene	ND		2.0	ug/L		ND				35
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L		ND				35
Ethylbenzene	ND		1.0	ug/L		ND				35
Total Xylenes	ND		2.0	ug/L		ND				35
Naphthalene	ND		5.0	ug/L		ND				35
2-Methylnaphthalene	ND		5.0	ug/L		ND				35
1-Methylnaphthalene	ND		5.0	ug/L		ND				35
<i>Surrogate: Dibromofluoromethane</i>			26.7	ug/L	20.0		133	49.6-175		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			26.5	ug/L	20.0		132	31.7-194		
<i>Surrogate: Toluene-d8</i>			26.2	ug/L	20.0		131	52.9-135		
<i>Surrogate: 4-Bromofluorobenzene</i>			19.5	ug/L	20.0		97.6	50.8-121		
Matrix Spike (BYI0127-MS1)		Parent: L24I091-01			Prepared & Analyzed: 9/25/2024					
Methyl tert-Butyl Ether (MTBE)	5.28		5.0	ug/L	5.00	ND	106	55.3-168		
Benzene	3.81		1.0	ug/L	5.00	ND	76.1	55.1-155		
1,2-Dichloroethane (EDC)	4.50		1.0	ug/L	5.00	ND	90.1	38.2-189		
Toluene	3.52		2.0	ug/L	5.00	ND	70.5	23-175		
1,2-Dibromoethane (EDB) (SIM)	5.14		0.010	ug/L	5.00	ND	103	44.7-143		
Ethylbenzene	4.77		1.0	ug/L	5.00	ND	95.5	57-127		
Total Xylenes	13.3		2.0	ug/L	15.0	ND	88.7	44.1-133		
Naphthalene	8.24		5.0	ug/L	5.00	ND	165	22.3-211		
2-Methylnaphthalene	4.69		5.0	ug/L		ND		10-200		
1-Methylnaphthalene	9.27		5.0	ug/L		ND		10-209		
<i>Surrogate: Dibromofluoromethane</i>			19.9	ug/L	20.0		99.7	49.6-175		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			19.2	ug/L	20.0		95.8	31.7-194		
<i>Surrogate: Toluene-d8</i>			19.4	ug/L	20.0		96.9	52.9-135		
<i>Surrogate: 4-Bromofluorobenzene</i>			22.6	ug/L	20.0		113	50.8-121		
Matrix Spike Dup (BYI0127-MSD1)		Parent: L24I091-01			Prepared & Analyzed: 9/25/2024					
Methyl tert-Butyl Ether (MTBE)	5.22		5.0	ug/L	5.00	ND	104	55.3-168	1.09	35
Benzene	3.80		1.0	ug/L	5.00	ND	76.0	55.1-155	0.158	35
1,2-Dichloroethane (EDC)	4.58		1.0	ug/L	5.00	ND	91.6	38.2-189	1.67	35
Toluene	3.50		2.0	ug/L	5.00	ND	70.1	23-175	0.598	35
1,2-Dibromoethane (EDB) (SIM)	5.15		0.010	ug/L	5.00	ND	103	44.7-143	0.214	35
Ethylbenzene	4.48		1.0	ug/L	5.00	ND	89.6	57-127	6.38	35
Total Xylenes	12.2		2.0	ug/L	15.0	ND	81.2	44.1-133	8.90	35
Naphthalene	5.56	R	5.0	ug/L	5.00	ND	111	22.3-211	38.7	35
2-Methylnaphthalene	4.63		5.0	ug/L		ND		10-200	1.40	35
1-Methylnaphthalene	5.76	R	5.0	ug/L		ND		10-209	46.8	35
<i>Surrogate: Dibromofluoromethane</i>			21.4	ug/L	20.0		107	49.6-175		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			20.4	ug/L	20.0		102	31.7-194		
<i>Surrogate: Toluene-d8</i>			20.4	ug/L	20.0		102	52.9-135		
<i>Surrogate: 4-Bromofluorobenzene</i>			22.7	ug/L	20.0		113	50.8-121		
Blank (BYI0128-BLK1)					Prepared & Analyzed: 9/26/2024					
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L						
Benzene	ND		1.0	ug/L						
1,2-Dichloroethane (EDC)	ND		1.0	ug/L						
Toluene	ND		2.0	ug/L						
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L						



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Work Order: L24I092
Reported: 10/03/2024 14:04

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (BYI0128-BLK1)					Prepared & Analyzed: 9/26/2024					
Ethylbenzene	ND		1.0	ug/L						
Total Xylenes	ND		2.0	ug/L						
Naphthalene	ND		5.0	ug/L						
2-Methylnaphthalene	ND		5.0	ug/L						
1-Methylnaphthalene	ND		5.0	ug/L						
Surrogate: Dibromofluoromethane			26.6	ug/L	20.0		133	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			25.6	ug/L	20.0		128	31.7-194		
Surrogate: Toluene-d8			25.1	ug/L	20.0		126	52.9-135		
Surrogate: 4-Bromofluorobenzene			20.3	ug/L	20.0		102	50.8-121		
LCS (BYI0128-BS1)					Prepared & Analyzed: 9/26/2024					
Methyl tert-Butyl Ether (MTBE)	5.64		5.0	ug/L	5.00		113	29.6-190		
Benzene	4.51		1.0	ug/L	5.00		90.2	54.1-136		
1,2-Dichloroethane (EDC)	5.46		1.0	ug/L	5.00		109	52.8-185		
Toluene	4.25		2.0	ug/L	5.00		84.9	53.3-135		
1,2-Dibromoethane (EDB) (SIM)	5.15		0.010	ug/L	5.00		103	34.5-141		
Ethylbenzene	4.76		1.0	ug/L	5.00		95.2	51.1-125		
Total Xylenes	13.4		2.0	ug/L	15.0		89.2	47.2-123		
Naphthalene	4.06		5.0	ug/L	5.00		81.1	10-220		
2-Methylnaphthalene	6.34		5.0	ug/L				16.1-204		
1-Methylnaphthalene	6.06		5.0	ug/L				10-205		
Surrogate: Dibromofluoromethane			25.9	ug/L	20.0		130	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			25.4	ug/L	20.0		127	31.7-194		
Surrogate: Toluene-d8			24.4	ug/L	20.0		122	52.9-135		
Surrogate: 4-Bromofluorobenzene			23.7	ug/L	20.0		119	50.8-121		
Duplicate (BYI0128-DUP1)					Parent: L24I093-01 Prepared & Analyzed: 9/26/2024					
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L		ND				35
Benzene	ND		1.0	ug/L		ND				35
1,2-Dichloroethane (EDC)	ND		1.0	ug/L		ND				35
Toluene	ND		2.0	ug/L		0.291				35
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L		0.0120				35
Ethylbenzene	ND		1.0	ug/L		ND				35
Total Xylenes	ND		2.0	ug/L		1.27				35
Naphthalene	ND		5.0	ug/L		ND				35
2-Methylnaphthalene	ND		5.0	ug/L		4.57				35
1-Methylnaphthalene	ND		5.0	ug/L		4.12				35
Surrogate: Dibromofluoromethane			25.5	ug/L	20.0		127	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			24.8	ug/L	20.0		124	31.7-194		
Surrogate: Toluene-d8			25.0	ug/L	20.0		125	52.9-135		
Surrogate: 4-Bromofluorobenzene			20.6	ug/L	20.0		103	50.8-121		



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Work Order: L24I092
Reported: 10/03/2024 14:04

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Duplicate (BYI0128-DUP2)		Parent: L24I092-05			Prepared & Analyzed: 9/26/2024					
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L		ND				35
Benzene	ND		1.0	ug/L		ND				35
1,2-Dichloroethane (EDC)	ND		1.0	ug/L		ND				35
Toluene	ND		2.0	ug/L		ND				35
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L		ND				35
Ethylbenzene	ND		1.0	ug/L		ND				35
Total Xylenes	ND		2.0	ug/L		ND				35
Naphthalene	ND		5.0	ug/L		ND				35
2-Methylnaphthalene	ND		5.0	ug/L		ND				35
1-Methylnaphthalene	ND		5.0	ug/L		ND				35
<i>Surrogate: Dibromofluoromethane</i>			25.8	ug/L	20.0		129	49.6-175		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			26.1	ug/L	20.0		130	31.7-194		
<i>Surrogate: Toluene-d8</i>			25.2	ug/L	20.0		126	52.9-135		
<i>Surrogate: 4-Bromofluorobenzene</i>			19.8	ug/L	20.0		98.8	50.8-121		
Matrix Spike (BYI0128-MS1)		Parent: L24I093-01			Prepared & Analyzed: 9/26/2024					
Methyl tert-Butyl Ether (MTBE)	5.50		5.0	ug/L	5.00	ND	110	55.3-168		
Benzene	4.69		1.0	ug/L	5.00	ND	93.8	55.1-155		
1,2-Dichloroethane (EDC)	4.65		1.0	ug/L	5.00	ND	93.1	38.2-189		
Toluene	4.50		2.0	ug/L	5.00	0.291	84.2	23-175		
1,2-Dibromoethane (EDB) (SIM)	4.85		0.010	ug/L	5.00	0.0120	96.7	44.7-143		
Ethylbenzene	4.46		1.0	ug/L	5.00	ND	89.2	57-127		
Total Xylenes	12.6		2.0	ug/L	15.0	1.27	75.5	44.1-133		
Naphthalene	7.24		5.0	ug/L	5.00	ND	145	22.3-211		
2-Methylnaphthalene	4.86		5.0	ug/L		4.57		10-200		
1-Methylnaphthalene	7.17		5.0	ug/L		4.12		10-209		
<i>Surrogate: Dibromofluoromethane</i>			25.3	ug/L	20.0		127	49.6-175		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			21.9	ug/L	20.0		109	31.7-194		
<i>Surrogate: Toluene-d8</i>			25.7	ug/L	20.0		129	52.9-135		
<i>Surrogate: 4-Bromofluorobenzene</i>			23.9	ug/L	20.0		120	50.8-121		
Matrix Spike Dup (BYI0128-MSD1)		Parent: L24I093-01			Prepared & Analyzed: 9/26/2024					
Methyl tert-Butyl Ether (MTBE)	5.51		5.0	ug/L	5.00	ND	110	55.3-168	0.127	35
Benzene	4.37		1.0	ug/L	5.00	ND	87.3	55.1-155	7.11	35
1,2-Dichloroethane (EDC)	4.52		1.0	ug/L	5.00	ND	90.4	38.2-189	2.94	35
Toluene	4.24		2.0	ug/L	5.00	0.291	78.9	23-175	6.02	35
1,2-Dibromoethane (EDB) (SIM)	4.81		0.010	ug/L	5.00	0.0120	96.0	44.7-143	0.746	35
Ethylbenzene	4.16		1.0	ug/L	5.00	ND	83.1	57-127	7.10	35
Total Xylenes	12.4		2.0	ug/L	15.0	1.27	73.9	44.1-133	1.87	35
Naphthalene	7.45		5.0	ug/L	5.00	ND	149	22.3-211	2.82	35
2-Methylnaphthalene	4.72		5.0	ug/L		4.57		10-200	3.01	35
1-Methylnaphthalene	4.18	R	5.0	ug/L		4.12		10-209	52.6	35
<i>Surrogate: Dibromofluoromethane</i>			25.6	ug/L	20.0		128	49.6-175		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			21.9	ug/L	20.0		109	31.7-194		
<i>Surrogate: Toluene-d8</i>			25.8	ug/L	20.0		129	52.9-135		
<i>Surrogate: 4-Bromofluorobenzene</i>			23.0	ug/L	20.0		115	50.8-121		
Blank (BYI0130-BLK1)					Prepared & Analyzed: 9/27/2024					
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L						
Benzene	ND		1.0	ug/L						
1,2-Dichloroethane (EDC)	ND		1.0	ug/L						
Toluene	ND		2.0	ug/L						
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L						



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Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (BYI0130-BLK1)					Prepared & Analyzed: 9/27/2024					
Ethylbenzene	ND		1.0	ug/L						
Total Xylenes	ND		2.0	ug/L						
Naphthalene	ND		5.0	ug/L						
2-Methylnaphthalene	ND		5.0	ug/L						
1-Methylnaphthalene	ND		5.0	ug/L						
Surrogate: Dibromofluoromethane			26.1	ug/L	20.0		130	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			23.0	ug/L	20.0		115	31.7-194		
Surrogate: Toluene-d8			25.1	ug/L	20.0		125	52.9-135		
Surrogate: 4-Bromofluorobenzene			21.1	ug/L	20.0		105	50.8-121		
LCS (BYI0130-BS1)					Prepared & Analyzed: 9/27/2024					
Methyl tert-Butyl Ether (MTBE)	5.31		5.0	ug/L	5.00		106	29.6-190		
Benzene	4.56		1.0	ug/L	5.00		91.2	54.1-136		
1,2-Dichloroethane (EDC)	5.26		1.0	ug/L	5.00		105	52.8-185		
Toluene	4.58		2.0	ug/L	5.00		91.6	53.3-135		
1,2-Dibromoethane (EDB) (SIM)	5.25		0.010	ug/L	5.00		105	34.5-141		
Ethylbenzene	4.60		1.0	ug/L	5.00		92.0	51.1-125		
Total Xylenes	13.6		2.0	ug/L	15.0		91.0	47.2-123		
Naphthalene	4.01		5.0	ug/L	5.00		80.2	10-220		
2-Methylnaphthalene	4.70		5.0	ug/L				16.1-204		
1-Methylnaphthalene	4.23		5.0	ug/L				10-205		
Surrogate: Dibromofluoromethane			26.5	ug/L	20.0		132	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			25.2	ug/L	20.0		126	31.7-194		
Surrogate: Toluene-d8			25.6	ug/L	20.0		128	52.9-135		
Surrogate: 4-Bromofluorobenzene			24.2	ug/L	20.0		121	50.8-121		
Duplicate (BYI0130-DUP1)					Parent: L24I094-02 Prepared & Analyzed: 9/27/2024					
Methyl tert-Butyl Ether (MTBE)	ND		5.0	ug/L		ND				35
Benzene	ND		1.0	ug/L		ND				35
1,2-Dichloroethane (EDC)	ND		1.0	ug/L		ND				35
Toluene	ND		2.0	ug/L		ND				35
1,2-Dibromoethane (EDB) (SIM)	ND		0.010	ug/L		ND				35
Ethylbenzene	ND		1.0	ug/L		ND				35
Total Xylenes	ND		2.0	ug/L		ND				35
Naphthalene	ND		5.0	ug/L		ND				35
2-Methylnaphthalene	ND		5.0	ug/L		ND				35
1-Methylnaphthalene	ND		5.0	ug/L		ND				35
Surrogate: Dibromofluoromethane			20.4	ug/L	20.0		102	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			20.2	ug/L	20.0		101	31.7-194		
Surrogate: Toluene-d8			20.1	ug/L	20.0		100	52.9-135		
Surrogate: 4-Bromofluorobenzene			19.4	ug/L	20.0		97.2	50.8-121		



Libby Environmental, Inc.

Montrose Environmental Group, Inc.
4150 B Place NW, Suite 106
Auburn, WA 98001

Project: 5468, Springfield
Project Number: 027409
Project Manager: Laura Skow

City/State: Springfield, WA
Work Order: L24I092
Reported: 10/03/2024 14:04

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Matrix Spike (BYI0130-MS1)		Parent: L24I094-02			Prepared & Analyzed: 9/27/2024					
Methyl tert-Butyl Ether (MTBE)	3.95		5.0	ug/L	5.00	ND	79.0	55.3-168		
Benzene	3.53		1.0	ug/L	5.00	ND	70.6	55.1-155		
1,2-Dichloroethane (EDC)	4.32		1.0	ug/L	5.00	ND	86.4	38.2-189		
Toluene	3.41		2.0	ug/L	5.00	ND	68.1	23-175		
1,2-Dibromoethane (EDB) (SIM)	5.06		0.010	ug/L	5.00	ND	101	44.7-143		
Ethylbenzene	4.30		1.0	ug/L	5.00	ND	86.1	57-127		
Total Xylenes	13.7		2.0	ug/L	15.0	ND	91.2	44.1-133		
Naphthalene	4.04		5.0	ug/L	5.00	ND	80.8	22.3-211		
2-Methylnaphthalene	4.74		5.0	ug/L		ND		10-200		
1-Methylnaphthalene	6.06		5.0	ug/L		ND		10-209		
<i>Surrogate: Dibromofluoromethane</i>			20.5	ug/L	20.0		102	49.6-175		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			19.6	ug/L	20.0		98.2	31.7-194		
<i>Surrogate: Toluene-d8</i>			19.8	ug/L	20.0		98.8	52.9-135		
<i>Surrogate: 4-Bromofluorobenzene</i>			23.8	ug/L	20.0		119	50.8-121		
Matrix Spike Dup (BYI0130-MSD1)		Parent: L24I094-02			Prepared & Analyzed: 9/27/2024					
Methyl tert-Butyl Ether (MTBE)	5.16		5.0	ug/L	5.00	ND	103	55.3-168	26.6	35
Benzene	4.46		1.0	ug/L	5.00	ND	89.2	55.1-155	23.3	35
1,2-Dichloroethane (EDC)	5.26		1.0	ug/L	5.00	ND	105	38.2-189	19.5	35
Toluene	4.75		2.0	ug/L	5.00	ND	95.1	23-175	33.0	35
1,2-Dibromoethane (EDB) (SIM)	4.96		0.010	ug/L	5.00	ND	99.2	44.7-143	2.07	35
Ethylbenzene	4.54		1.0	ug/L	5.00	ND	90.8	57-127	5.31	35
Total Xylenes	12.5		2.0	ug/L	15.0	ND	83.5	44.1-133	8.81	35
Naphthalene	4.02		5.0	ug/L	5.00	ND	80.4	22.3-211	0.471	35
2-Methylnaphthalene	4.58		5.0	ug/L		ND		10-200	3.22	35
1-Methylnaphthalene	6.07		5.0	ug/L		ND		10-209	0.115	35
<i>Surrogate: Dibromofluoromethane</i>			26.0	ug/L	20.0		130	49.6-175		
<i>Surrogate: 1,2-Dichloroethane-d4</i>			25.8	ug/L	20.0		129	31.7-194		
<i>Surrogate: Toluene-d8</i>			25.4	ug/L	20.0		127	52.9-135		
<i>Surrogate: 4-Bromofluorobenzene</i>			23.5	ug/L	20.0		118	50.8-121		



Libby Environmental, Inc.

Montrose Environmental Group, Inc.
4150 B Place NW, Suite 106
Auburn, WA 98001

Project: 5468, Springfield
Project Number: 027409
Project Manager: Laura Skow

City/State: Springfield, WA
Work Order: L24I092
Reported: 10/03/2024 14:04

Quality Control (Continued)

Gasoline by Method NWTPH-Gx

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BYI0127 - VOA										
Blank (BYI0127-BLK1)										
Gasoline	ND		100	ug/L	Prepared & Analyzed: 9/25/2024					
Surrogate: Toluene-d8			26.3	ug/L	20.0		131	52.9-135		
Duplicate (BYI0127-DUP1)										
Gasoline	ND		100	ug/L	Prepared & Analyzed: 9/25/2024					
Surrogate: Toluene-d8			25.6	ug/L	20.0	ND	128	52.9-135		35
Duplicate (BYI0127-DUP2)										
Gasoline	ND		100	ug/L	Prepared & Analyzed: 9/25/2024					
Surrogate: Toluene-d8			26.2	ug/L	20.0	ND	131	52.9-135		35
Blank (BYI0128-BLK1)										
Gasoline	ND		100	ug/L	Prepared & Analyzed: 9/26/2024					
Surrogate: Toluene-d8			25.1	ug/L	20.0		126	52.9-135		
Duplicate (BYI0128-DUP1)										
Gasoline	149		100	ug/L	Prepared & Analyzed: 9/26/2024					
Surrogate: Toluene-d8			25.0	ug/L	20.0	145	125	52.9-135	2.57	35
Duplicate (BYI0128-DUP2)										
Gasoline	ND		100	ug/L	Prepared & Analyzed: 9/26/2024					
Surrogate: Toluene-d8			25.2	ug/L	20.0	ND	126	52.9-135		35
Blank (BYI0130-BLK1)										
Gasoline	ND		100	ug/L	Prepared & Analyzed: 9/27/2024					
Surrogate: Toluene-d8			25.1	ug/L	20.0		125	52.9-135		
Duplicate (BYI0130-DUP1)										
Gasoline	ND		100	ug/L	Prepared & Analyzed: 9/27/2024					
Surrogate: Toluene-d8			20.1	ug/L	20.0	ND	100	52.9-135		35



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Work Order: L24I092
Reported: 10/03/2024 14:04

Quality Control (Continued)

Total Metals by EPA Method 7010

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BYI0141 - Metals Digest										
Blank (BYI0141-BLK1)										
Lead	ND		5.0	ug/L						
					Prepared: 9/30/2024	Analyzed: 10/1/2024				
LCS (BYI0141-BS1)										
Lead	19.9		5.0	ug/L	20.0		99.6	80-120		
					Prepared: 9/30/2024	Analyzed: 10/1/2024				
LCS Dup (BYI0141-BSD1)										
Lead	20.7		5.0	ug/L	20.0		104	80-120	3.91	20
					Prepared: 9/30/2024	Analyzed: 10/1/2024				
Duplicate (BYI0141-DUP1)										
Lead	ND		5.0	ug/L		ND				20
					Prepared: 9/30/2024	Analyzed: 10/1/2024				
Duplicate (BYI0141-DUP2)										
Lead	ND		5.0	ug/L		ND				20
					Prepared: 9/30/2024	Analyzed: 10/1/2024				
Matrix Spike (BYI0141-MS1)										
Lead	20.2		5.0	ug/L	20.0	ND	101	75-125		
					Prepared: 9/30/2024	Analyzed: 10/1/2024				
Matrix Spike Dup (BYI0141-MSD1)										
Lead	24.2		5.0	ug/L	20.0	ND	121	75-125	17.7	20
					Prepared: 9/30/2024	Analyzed: 10/1/2024				
Blank (BYJ0006-BLK1)										
Lead	ND		5.0	ug/L						
					Prepared: 10/1/2024	Analyzed: 10/2/2024				
LCS (BYJ0006-BS1)										
Lead	20.1		5.0	ug/L	20.0		100	80-120		
					Prepared: 10/1/2024	Analyzed: 10/2/2024				
LCS Dup (BYJ0006-BSD1)										
Lead	19.3		5.0	ug/L	20.0		96.6	80-120	3.80	20
					Prepared: 10/1/2024	Analyzed: 10/2/2024				
Duplicate (BYJ0006-DUP1)										
Lead	ND		5.0	ug/L		ND				20
					Prepared: 10/1/2024	Analyzed: 10/2/2024				
Matrix Spike (BYJ0006-MS1)										
Lead	20.5		5.0	ug/L	20.0	ND	103	75-125		
					Prepared: 10/1/2024	Analyzed: 10/2/2024				



Libby Environmental, Inc.

Montrose Environmental Group, Inc.
 4150 B Place NW, Suite 106
 Auburn, WA 98001

Project: 5468, Springfield
Project Number: 027409
Project Manager: Laura Skow

City/State: Springfield, WA
Work Order: L24I092
Reported: 10/03/2024 14:04

Quality Control (Continued)

Total Metals by EPA Method 7010 (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Matrix Spike Dup (BYJ0006-MSD1)		Parent: L24I092-13			Prepared: 10/1/2024		Analyzed: 10/2/2024			
Lead	17.7		5.0	ug/L	20.0	ND	88.4	75-125	14.9	20

Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

5468, Springfield Project

Montrose Environmental Group, Inc.

Libby Work Order # L24I092

Date Received 9/25/2024

Time Received 1:35 PM

Received By ES

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody is complete? Yes No
2. How was the sample delivered? Hand Delivered Picked Up Shipped

Log In

3. Cooler or Shipping Container is present. Yes No N/A
4. Cooler or Shipping Container is in good condition. Yes No N/A
5. Cooler or Shipping Container has Custody Seals present. Yes No N/A
6. Was an attempt made to cool the samples? Yes No N/A
7. Temperature of cooler (0°C to 8°C recommended) 0.1 °C
8. Temperature of sample(s) (0°C to 8°C recommended) 2.3 °C
9. Did all containers arrive in good condition (unbroken)? Yes No
10. Is it clear what analyses were requested? Yes No
11. Did container labels match Chain of Custody? Yes No
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Are correct containers used for the analysis indicated? Yes No
14. Is there sufficient sample volume for indicated analysis? Yes No
15. Were all containers properly preserved per each analysis? Yes No
16. Were VOA vials collected correctly (no headspace)? Yes No N/A
17. Were all holding times able to be met? Yes No

Discrepancies/ Notes

18. Was client notified of all discrepancies? Yes No N/A

Person Notified: Laura Skow

Date: 9/25/2024

By Whom: MF

Via: email

Regarding: Sample EB-2

19. Comments. No containers received for EB-2
- _____
- _____
- _____

APPENDIX D

Groundwater Monitoring Field Forms

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: <u>5468 Springfield</u> Project Number: <u>Proj-027409</u> Date: <u>9/24/24</u> Site Engineer(s): <u>E.RIVERA</u>	Well Number: <u>MW-9</u> Equipment: <u>122.451-DSS, Geo Sub</u> Sample ID / Time: <u>MW-9@ 0911</u> Contractor: <u>Montrose Environmental Group</u>
--	--

Well Diameter: <u>4"</u> Casing Material: <u>PVC</u> Reference: Top of Casing Before After <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 30%;">Depth to Water (ft)</td> <td style="width: 35%; text-align: center;"><u>10.68</u></td> <td style="width: 35%; text-align: center;"><u>10.80</u></td> </tr> <tr> <td>Depth of Well (ft)</td> <td style="text-align: center;"><u>17.24</u></td> <td style="text-align: center;"><u>NA</u></td> </tr> <tr> <td>Water Column Height (ft)</td> <td style="text-align: center;"><u>6.56</u></td> <td style="text-align: center;"><u>6.44</u></td> </tr> <tr> <td>Calculated Drawdown (ft)</td> <td style="text-align: center;"><u>NA</u></td> <td style="text-align: center;"><u>0.12</u></td> </tr> <tr> <td>Depth to Top of Screen</td> <td colspan="2" style="text-align: center;"><u>-</u></td> </tr> <tr> <td>Screen Length (ft)</td> <td colspan="2" style="text-align: center;"><u>-</u></td> </tr> <tr> <td>Pump depth (ft)</td> <td colspan="2" style="text-align: center;"><u>13'</u></td> </tr> </table>	Depth to Water (ft)	<u>10.68</u>	<u>10.80</u>	Depth of Well (ft)	<u>17.24</u>	<u>NA</u>	Water Column Height (ft)	<u>6.56</u>	<u>6.44</u>	Calculated Drawdown (ft)	<u>NA</u>	<u>0.12</u>	Depth to Top of Screen	<u>-</u>		Screen Length (ft)	<u>-</u>		Pump depth (ft)	<u>13'</u>		System Volume ^(a) (ml) = bladder + discharge tubing Volume of bladder (ml): _____ Volume of flow through cell ^(a) (ml): _____ Radius of discharge tubing (ft): <u>1/4"</u> Length (H) of discharge tubing (ft): <u>20'</u> System Volume (ml): _____ Total Volume Purged (ml): <u>2,700</u> Total No. of SV Purged: _____ Notes/Calcs: (a): flow cell disconnected before sample collection 1 ft of tubing = 10 ml
Depth to Water (ft)	<u>10.68</u>	<u>10.80</u>																				
Depth of Well (ft)	<u>17.24</u>	<u>NA</u>																				
Water Column Height (ft)	<u>6.56</u>	<u>6.44</u>																				
Calculated Drawdown (ft)	<u>NA</u>	<u>0.12</u>																				
Depth to Top of Screen	<u>-</u>																					
Screen Length (ft)	<u>-</u>																					
Pump depth (ft)	<u>13'</u>																					

WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
<u>0900</u>	<u>-</u>	<u>10.80</u>	<u>-</u>	<u>4.36</u>	<u>83.6</u>	<u>284.5</u>	<u>6.75</u>	<u>18.4</u>	<u>8.25</u>
<u>0903</u>	<u>2400</u>	<u>10.86</u>	<u>800</u>	<u>1.30</u>	<u>108.5</u>	<u>287.9</u>	<u>6.14</u>	<u>17.9</u>	<u>6.44</u>
<u>0906</u>	<u>2400</u>	<u>10.91</u>	<u>800</u>	<u>1.21</u>	<u>103.6</u>	<u>282.6</u>	<u>6.09</u>	<u>18.0</u>	<u>5.68</u>
<u>0909</u>	<u>2400</u>	<u>11.01</u>	<u>800</u>	<u>1.15</u>	<u>102.5</u>	<u>281.0</u>	<u>6.01</u>	<u>18.1</u>	<u>5.11</u>
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes:

Dissolved Iron (Fe⁺²) = 0.5

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: <u>5468 Springfield</u> Project Number: <u>Proj-027409</u> Date: <u>9/24/24</u> Site Engineer(s): <u>E.RIVERA</u>	Well Number: <u>MW-8</u> Equipment: <u>122, 1/51 DSS, Geosub</u> Sample ID / Time: <u>MW-8 @ 0939</u> Contractor: <u>Montrose Environmental Group</u>
--	--

Well Diameter: <u>4"</u>	Casing Material: PVC	
Reference: Top of Casing	Before	After
Depth to Water (ft)	<u>11.91</u>	<u>12.10</u>
Depth of Well (ft)	<u>18.11</u>	NA
Water Column Height (ft)	<u>6.20</u>	<u>6.01</u>
Calculated Drawdown (ft)	<u>N/A</u>	<u>0.19</u>
Depth to Top of Screen	<u>-</u>	
Screen Length (ft)	<u>-</u>	
Pump depth (ft)	<u>14'</u>	

System Volume^(a) (ml) = bladder + discharge tubing

Volume of bladder (ml): _____

Volume of flow through cell^(a) (ml): _____

Radius of discharge tubing (ft): 2/4"

Length (H) of discharge tubing (ft): 26'

System Volume (ml): _____

Total Volume Purged (ml): 7,200 mL

Total No. of SV Purged: _____

Notes/Calcs: (a): flow cell disconnected before sample collection

1 ft of tubing = 10 ml

WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
<u>0928</u>	<u>-</u>	<u>12.01</u>	<u>-</u>	<u>5.69</u>	<u>88.0</u>	<u>347.9</u>	<u>6.56</u>	<u>19.4</u>	<u>4.04</u>
<u>0931</u>	<u>2400</u>	<u>12.14</u>	<u>800 mL</u>	<u>2.68</u>	<u>94.7</u>	<u>376.8</u>	<u>6.40</u>	<u>19.6</u>	<u>2.38</u>
<u>0934</u>	<u>2400</u>	<u>12.20</u>	<u>800 mL</u>	<u>2.49</u>	<u>94.3</u>	<u>387.6</u>	<u>6.39</u>	<u>19.7</u>	<u>2.75</u>
<u>0937</u>	<u>2400</u>	<u>12.24</u>	<u>800 mL</u>	<u>2.40</u>	<u>94.1</u>	<u>393.8</u>	<u>6.38</u>	<u>19.8</u>	<u>2.50</u>
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes:

Dissolved Iron (Fe⁺²) = 0.5

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: <u>5468 Springfield</u> Project Number: <u>Proj-027409</u> Date: <u>9/24/24</u> Site Engineer(s): <u>E.RIVERA</u>	Well Number: <u>MW-10</u> Equipment: <u>122.1/51-DSS, L60545</u> Sample ID / Time: <u>MW-10@ 1000</u> Contractor: <u>Montrose Environmental Group</u>
--	--

Well Diameter: <u>4"</u> Casing Material: <u>PVC</u> Reference: Top of Casing Before After <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 30%;">Depth to Water (ft)</td> <td style="width: 35%; text-align: center;"><u>12.32</u></td> <td style="width: 35%; text-align: center;"><u>12.50</u></td> </tr> <tr> <td>Depth of Well (ft)</td> <td style="text-align: center;"><u>17.96</u></td> <td style="text-align: center;"><u>NA</u></td> </tr> <tr> <td>Water Column Height (ft)</td> <td style="text-align: center;"><u>5.58</u></td> <td style="text-align: center;"><u>5.40</u></td> </tr> <tr> <td>Calculated Drawdown (ft)</td> <td style="text-align: center;"><u>N/A</u></td> <td style="text-align: center;"><u>0.18</u></td> </tr> <tr> <td>Depth to Top of Screen</td> <td colspan="2" style="text-align: center;"><u>—</u></td> </tr> <tr> <td>Screen Length (ft)</td> <td colspan="2" style="text-align: center;"><u>—</u></td> </tr> <tr> <td>Pump depth (ft)</td> <td colspan="2" style="text-align: center;"><u>15'</u></td> </tr> </table>	Depth to Water (ft)	<u>12.32</u>	<u>12.50</u>	Depth of Well (ft)	<u>17.96</u>	<u>NA</u>	Water Column Height (ft)	<u>5.58</u>	<u>5.40</u>	Calculated Drawdown (ft)	<u>N/A</u>	<u>0.18</u>	Depth to Top of Screen	<u>—</u>		Screen Length (ft)	<u>—</u>		Pump depth (ft)	<u>15'</u>		System Volume ^(a) (ml) = bladder + discharge tubing Volume of bladder (ml): _____ Volume of flow through cell ^(a) (ml): _____ Radius of discharge tubing (ft): <u>1/4"</u> Length (H) of discharge tubing (ft): <u>22'</u> System Volume (ml): _____ Total Volume Purged (ml): <u>7200 ml</u> Total No. of SV Purged: _____ Notes/Calcs: (a): flow cell disconnected before sample collection 1 ft of tubing = 10 ml
Depth to Water (ft)	<u>12.32</u>	<u>12.50</u>																				
Depth of Well (ft)	<u>17.96</u>	<u>NA</u>																				
Water Column Height (ft)	<u>5.58</u>	<u>5.40</u>																				
Calculated Drawdown (ft)	<u>N/A</u>	<u>0.18</u>																				
Depth to Top of Screen	<u>—</u>																					
Screen Length (ft)	<u>—</u>																					
Pump depth (ft)	<u>15'</u>																					

WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
<u>0950</u>	<u>—</u>	<u>12.50</u>	<u>—</u>	<u>5.30</u>	<u>107.0</u>	<u>478.0</u>	<u>6.45</u>	<u>18.7</u>	<u>6.68</u>
<u>0953</u>	<u>2400</u>	<u>12.59</u>	<u>800</u>	<u>2.00</u>	<u>117.8</u>	<u>499.9</u>	<u>6.09</u>	<u>18.7</u>	<u>5.16</u>
<u>0956</u>	<u>2400</u>	<u>12.70</u>	<u>800</u>	<u>1.85</u>	<u>114.0</u>	<u>503</u>	<u>6.10</u>	<u>18.7</u>	<u>4.70</u>
<u>0959</u>	<u>2400</u>	<u>12.74</u>	<u>800</u>	<u>1.70</u>	<u>111.8</u>	<u>509</u>	<u>6.09</u>	<u>18.7</u>	<u>4.58</u>
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes:

Dissolved Iron (Fe⁺²) = 0.0

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: <u>5468 Springfield</u> Project Number: <u>Proj-027409</u> Date: <u>9/24/24</u> Site Engineer(s): <u>E.RIVERA</u>	Well Number: <u>MW-7</u> Equipment: <u>122, 151-022 Geo Sub</u> Sample ID / Time: <u>MW-7 @ 1019</u> Contractor: <u>Montrose Environmental Group</u>
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Well Diameter:	Casing Material: PVC	
Reference: Top of Casing	Before	After
Depth to Water (ft)	12.60	12.81
Depth of Well (ft)	24.70	NA
Water Column Height (ft)	12.10	11.89
Calculated Drawdown (ft)	N/A	0.21
Depth to Top of Screen	—	
Screen Length (ft)	—	
Pump depth (ft)	19'	

System Volume^(a) (ml) = bladder + discharge tubing

Volume of bladder (ml): _____

Volume of flow through cell^(a) (ml): _____

Radius of discharge tubing (ft): 1/4"

Length (H) of discharge tubing (ft): 30'

System Volume (ml): _____

Total Volume Purged (ml): 7,200 ml

Total No. of SV Purged: _____

Notes/Calcs: (a): flow cell disconnected before sample collection

1 ft of tubing = 10 ml

WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
1008	—	12.80	—	3.29	38.5	643	6.38	18.9	10.30
1011	2400	13.00	800	0.58	-15.9	660	6.30	19.1	10.41
1014	2400	13.13	800	0.42	-28.9	659	6.34	19.4	12.13
1017	2400	13.19	800	0.38	-38.6	659	6.35	17.4	13.41
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes: purged well out of order to accommodate station gas service

Dissolved Iron (Fe⁺²) = 10.0

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: <u>5468 Springfield</u> Project Number: <u>Proj-027409</u> Date: <u>9/24/24</u> Site Engineer(s): <u>E.RIVERA</u>	Well Number: <u>MW-11</u> Equipment: <u>12.451-DS, Geo Sub</u> Sample ID / Time: <u>MW-11@ 1043</u> Contractor: <u>Montrose Environmental Group</u>
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Well Diameter: <u>8"</u> Casing Material: <u>PVC</u> Reference: Top of Casing Before After <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 30%;">Depth to Water (ft)</td> <td style="width: 35%; text-align: center;">12.11</td> <td style="width: 35%; text-align: center;">12.42</td> </tr> <tr> <td>Depth of Well (ft)</td> <td style="text-align: center;">20.02</td> <td style="text-align: center;">NA</td> </tr> <tr> <td>Water Column Height (ft)</td> <td style="text-align: center;">7.91</td> <td style="text-align: center;">7.60</td> </tr> <tr> <td>Calculated Drawdown (ft)</td> <td style="text-align: center;">4.12</td> <td style="text-align: center;">0.31</td> </tr> <tr> <td>Depth to Top of Screen</td> <td colspan="2" style="text-align: center;">—</td> </tr> <tr> <td>Screen Length (ft)</td> <td colspan="2" style="text-align: center;">—</td> </tr> <tr> <td>Pump depth (ft)</td> <td colspan="2" style="text-align: center;">18'</td> </tr> </table>	Depth to Water (ft)	12.11	12.42	Depth of Well (ft)	20.02	NA	Water Column Height (ft)	7.91	7.60	Calculated Drawdown (ft)	4.12	0.31	Depth to Top of Screen	—		Screen Length (ft)	—		Pump depth (ft)	18'		System Volume ^(a) (ml) = bladder + discharge tubing Volume of bladder (ml): _____ Volume of flow through cell ^(a) (ml): _____ Radius of discharge tubing (ft): <u>4"</u> Length (L) of discharge tubing (ft): <u>25'</u> System Volume (ml): _____ Total Volume Purged (ml): <u>7,200 ml</u> Total No. of SV Purged: _____ Notes/Calcs: (a): flow cell disconnected before sample collection 1 ft of tubing = 10 ml
Depth to Water (ft)	12.11	12.42																				
Depth of Well (ft)	20.02	NA																				
Water Column Height (ft)	7.91	7.60																				
Calculated Drawdown (ft)	4.12	0.31																				
Depth to Top of Screen	—																					
Screen Length (ft)	—																					
Pump depth (ft)	18'																					

WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
1031	—	12.20	—	5.44	-33.7	363.0	7.01	19.9	119.78
1034	2400	12.42	800	1.63	-15.8	360.1	6.66	19.5	60.50
1037	2400	12.61	800	1.51	-7.5	359.7	6.61	19.4	58.41
1040	2400	12.84	800	1.45	-4.8	358.6	6.59	19.4	50.30
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes:

Dissolved Iron (Fe⁺²) = 10.0

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: <u>5468 Springfield</u> Project Number: <u>Proj-027409</u> Date: <u>9/24/20</u> Site Engineer(s): <u>E.RIVERA</u>	Well Number: <u>MW-3</u> Equipment: <u>122.1/51045.6-48 SLB</u> Sample ID / Time: <u>MW-3 @ 1145</u> Contractor: <u>Montrose Environmental Group</u>
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Well Diameter: <u>4"</u>	Casing Material: PVC	
Reference: Top of Casing	Before	After
Depth to Water (ft)	<u>11.72</u>	<u>11.90</u>
Depth of Well (ft)	<u>26.35</u>	NA
Water Column Height (ft)	<u>14.63</u>	<u>14.45</u>
Calculated Drawdown (ft)	<u>0.16</u>	<u>0.18</u>
Depth to Top of Screen	-	
Screen Length (ft)	-	
Pump depth (ft)	<u>19'</u>	

System Volume^(a) (ml) = bladder + discharge tubing

Volume of bladder (ml): _____

Volume of flow through cell^(a) (ml): _____

Radius of discharge tubing (ft): 1/4"

Length (H) of discharge tubing (ft): 30'

System Volume (ml): _____

Total Volume Purged (ml): 2700 ml

Total No. of SV Purged: 27

Notes/Calcs: (a): flow cell disconnected before sample collection

1 ft of tubing = 10 ml

WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
<u>1134</u>	<u>-</u>	<u>11.36</u>	<u>-</u>	<u>5.10</u>	<u>26.2</u>	<u>260.6</u>	<u>7.76</u>	<u>19.2</u>	<u>13.62</u>
<u>1137</u>	<u>2400</u>	<u>11.89</u>	<u>800</u>	<u>3.15</u>	<u>48.7</u>	<u>259.7</u>	<u>6.91</u>	<u>18.9</u>	<u>10.45</u>
<u>1140</u>	<u>2400</u>	<u>12.00</u>	<u>800</u>	<u>3.08</u>	<u>49.8</u>	<u>259.8</u>	<u>6.79</u>	<u>18.9</u>	<u>9.65</u>
<u>1143</u>	<u>2400</u>	<u>12.10</u>	<u>800</u>	<u>3.01</u>	<u>52.1</u>	<u>261.9</u>	<u>6.78</u>	<u>18.9</u>	<u>9.01</u>
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes:

Dissolved Iron (Fe⁺²) = 0.5

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: <u>5468 Springfield</u> Project Number: <u>Proj-027409</u> Date: <u>9/24/21</u> Site Engineer(s): <u>E.RIVERA</u>	Well Number: <u>MW-4</u> Equipment: <u>122.1/51-055 GNDWAD</u> Sample ID / Time: <u>MW-4@1208</u> Contractor: <u>Montrose Environmental Group</u>
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Well Diameter: <u>4"</u> Casing Material: <u>PVC</u> Reference: Top of Casing Before After <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 30%;">Depth to Water (ft)</td> <td style="width: 15%;">10.51</td> <td style="width: 15%;">10.80</td> </tr> <tr> <td>Depth of Well (ft)</td> <td>23.20</td> <td>NA</td> </tr> <tr> <td>Water Column Height (ft)</td> <td>13.29</td> <td>13.07</td> </tr> <tr> <td>Calculated Drawdown (ft)</td> <td>N/A</td> <td>0.73</td> </tr> <tr> <td>Depth to Top of Screen</td> <td colspan="2">—</td> </tr> <tr> <td>Screen Length (ft)</td> <td colspan="2">—</td> </tr> <tr> <td>Pump depth (ft)</td> <td colspan="2">19'</td> </tr> </table>	Depth to Water (ft)	10.51	10.80	Depth of Well (ft)	23.20	NA	Water Column Height (ft)	13.29	13.07	Calculated Drawdown (ft)	N/A	0.73	Depth to Top of Screen	—		Screen Length (ft)	—		Pump depth (ft)	19'		System Volume ^(a) (ml) = bladder + discharge tubing Volume of bladder (ml): _____ Volume of flow through cell ^(a) (ml): _____ Radius of discharge tubing (ft): <u>1/4"</u> Length (L) of discharge tubing (ft): <u>30'</u> System Volume (ml): _____ Total Volume Purged (ml): <u>4,800 ml</u> Total No. of SV Purged: _____ Notes/Calcs: (a): flow cell disconnected before sample collection 1 ft of tubing = 10 ml
Depth to Water (ft)	10.51	10.80																				
Depth of Well (ft)	23.20	NA																				
Water Column Height (ft)	13.29	13.07																				
Calculated Drawdown (ft)	N/A	0.73																				
Depth to Top of Screen	—																					
Screen Length (ft)	—																					
Pump depth (ft)	19'																					

WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
1157	—	10.61	—	4.02	50.1	475.4	7.24	19.9	4.55
1200	1600	10.75	532.33	0.61	55.0	479.8	6.83	19.9	3.28
1203	1600	10.90	533.33	0.49	49.7	476.6	6.76	19.6	4.60
1206	1600	10.98	533.33	0.44	48.6	491.1	6.75	19.5	4.30
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes:

Dissolved Iron (Fe⁺²) = 0.5

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: <u>5468 Springfield</u> Project Number: <u>Proj-027409</u> Date: <u>9/24/24</u> Site Engineer(s): <u>E.RIVERA</u>	Well Number: <u>MW- 2</u> Equipment: <u>122.451-DSS, digi 200 sub</u> Sample ID / Time: <u>MW-2@ 1235</u> Contractor: <u>Montrose Environmental Group</u>
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Well Diameter: <u>4"</u>	Casing Material: PVC	
Reference: Top of Casing	Before	After
Depth to Water (ft)	<u>12.1'</u>	<u>12.28</u>
Depth of Well (ft)	<u>25.07</u>	NA
Water Column Height (ft)	<u>12.96</u>	<u>12.77</u>
Calculated Drawdown (ft)	<u>N/A</u>	<u>0.20</u>
Depth to Top of Screen	—	
Screen Length (ft)	—	
Pump depth (ft)	<u>19'</u>	

System Volume^(a) (ml) = bladder + discharge tubing

Volume of bladder (ml): _____

Volume of flow through cell^(a) (ml): _____

Radius of discharge tubing (ft): 1/4"

Length (H) of discharge tubing (ft): 30'

System Volume (ml): _____

Total Volume Purged (ml): 4,800 ml

Total No. of SV Purged: _____

Notes/Calcs: (a): flow cell disconnected before sample collection

1 ft of tubing = 10 ml

WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
<u>1223</u>	<u>—</u>	<u>12.17</u>	<u>—</u>	<u>4.46</u>	<u>33.1</u>	<u>439.1</u>	<u>6.86</u>	<u>20.2</u>	<u>8.9</u>
<u>1226</u>	<u>1600</u>	<u>12.20</u>	<u>533.33</u>	<u>0.46</u>	<u>-32.1</u>	<u>450.6</u>	<u>6.80</u>	<u>19.5</u>	<u>7.90</u>
<u>1229</u>	<u>1600</u>	<u>12.22</u>	<u>533.33</u>	<u>0.37</u>	<u>-40.1</u>	<u>454.7</u>	<u>6.80</u>	<u>19.4</u>	<u>7.75</u>
<u>1232</u>	<u>1600</u>	<u>12.24</u>	<u>533.33</u>	<u>0.32</u>	<u>-46.7</u>	<u>457.9</u>	<u>6.78</u>	<u>19.4</u>	<u>7.68</u>
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes:

Dissolved Iron (Fe⁺²) = 6.0

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: <u>5468 Springfield</u> Project Number: <u>Proj-027409</u> Date: <u>7/24/24</u> Site Engineer(s): <u>E.RIVERA</u>	Well Number: <u>EW-2R</u> Equipment: <u>12242-DS, GeoSia</u> Sample ID / Time: <u>EW-2R @ 1302</u> Contractor: <u>Montrose Environmental Group</u>
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Well Diameter: <u>4"</u> Reference: Top of Casing Depth to Water (ft): <u>11.22</u> Depth of Well (ft): <u>22.79</u> Water Column Height (ft): <u>11.57</u> Calculated Drawdown (ft): <u>N/A</u> Depth to Top of Screen: <u>-</u> Screen Length (ft): <u>-</u> Pump depth (ft): <u>19'</u>	Casing Material: PVC Before After	System Volume ^(a) (ml) = bladder + discharge tubing Volume of bladder (ml): _____ Volume of flow through cell ^(a) (ml): _____ Radius of discharge tubing (ft): <u>1/4"</u> Length (H) of discharge tubing (ft): <u>30'</u> System Volume (ml): _____ Total Volume Purged (ml): <u>4,800</u> Total No. of SV Purged: _____ Notes/Calcs: (a): flow cell disconnected before sample collection 1 ft of tubing = 10 ml
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WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
1249	—	11.40	—	3.12	-15.9	540	7.11	20.2	4.80
1252	1000	11.80	533.33	0.53	-60.6	552	7.02	19.7	4.38
1255	1000	11.91	533.33	0.40	-75.1	550	7.07	19.6	4.15
1258	1000	12.05	533.33	0.31	-77.9	6.50	7.05	19.4	4.10
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes:

Dissolved Iron (Fe⁺²) = 8.0

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: 5468 Springfield
 Project Number: Proj-027409
 Date: 9/24/24
 Site Engineer(s): E.RIVERA

Well Number: EW-4
 Equipment: _____
 Sample ID / Time: EW-4 @ 1328
 Contractor: Montrose Environmental Group

Well Diameter:	Casing Material: PVC	
Reference: Top of Casing	Before	After
Depth to Water (ft)	12.30	12.40
Depth of Well (ft)	22.90	NA
Water Column Height (ft)	10.00	10.50
Calculated Drawdown (ft)	—	0.10
Depth to Top of Screen	—	
Screen Length (ft)	—	
Pump depth (ft)	19'	

System Volume^(a) (ml) = bladder + discharge tubing
 Volume of bladder (ml): _____
 Volume of flow through cell^(a) (ml): _____
 Radius of discharge tubing (ft): 1/4"
 Length (L) of discharge tubing (ft): 20'
 System Volume (ml): _____
 Total Volume Purged (ml): 4,800 ml
 Total No. of SV Purged: _____

Notes/Calcs: (a) flow cell disconnected before sample collection
 1 ft of tubing = 10 ml

WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
1313	—	12.36	—	6.17	-25.6	540	7.18	21.8	10.06
1314	1000	12.40	533.33	0.54	-52.8	542	6.93	19.7	6.60
1319	1000	12.46	533.33	0.39	-64.8	541	6.92	19.6	5.91
1322	1000	12.50	533.33	0.30	-70.1	540	6.92	19.5	5.35
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes: _____

Dissolved Iron (Fe⁺²) = 4.8

LOW-FLOW GROUNDWATER SAMPLING LOG

Project Name: <u>5468 Springfield</u> Project Number: <u>Proj-027409</u> Date: <u>9/24/24</u> Site Engineer(s): <u>E.RIVERA</u>	Well Number: <u>MW-1</u> Equipment: <u>122, 451-055, 1200 sub</u> Sample ID / Time: <u>MW-1 @ 1355</u> Contractor: <u>Montrose Environmental Group</u>
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Well Diameter:	Casing Material: PVC	
Reference: Top of Casing	Before	After
Depth to Water (ft)	13.45	13.58
Depth of Well (ft)	24.50	NA
Water Column Height (ft)	11.05	10.92
Calculated Drawdown (ft)	N/A	0.13
Depth to Top of Screen	—	
Screen Length (ft)	—	
Pump depth (ft)	19'	

System Volume^(a) (ml) = bladder + discharge tubing

Volume of bladder (ml): _____

Volume of flow through cell^(a) (ml): _____

Radius of discharge tubing (ft): 1/4"

Length (H) of discharge tubing (ft): 30'

System Volume (ml): _____

Total Volume Purged (ml): 4,800 ml

Total No. of SV Purged: _____

Notes/Calcs: (a): flow cell disconnected before sample collection

1 ft of tubing = 10 ml

WATER QUALITY INDICATOR PARAMETERS

Time	Volume (ml)	Water Level (ft)	Pumping Rate (ml)	DO (mg/L)	ORP (mV)	Conductivity (µs/cm)	pH	Temp. (°C)	Turbidity (NTU)
1344	—	13.60	—	4.60	1.6	726	6.64	20.3	22.06
1347	1600	13.71	533.33	0.57	-22.8	790	6.31	19.0	16.33
1350	1600	13.79	533.33	0.40	-27.2	805	6.26	19.0	15.90
1353	1600	13.86	533.33	0.35	-31.8	810	6.28	19.1	15.98
Stability:				± 0.2 mg/L	± 20 mv	± 3-5%	± 0.2 units	± 0.2 units	± 10%

Notes: DUP-1 [from lab] was from MW-1

Dissolved Iron (Fe⁺²) = 6.0

WELLHEAD INSPECTION FORM

PN: _____

 Date: 9/24/24

 Page: 1 of 1

 Site: 5700 Main St. Springfield

 Client: United Pacific

 Technician: E. Ruona

Well ID	Well inspected - No corrective action required	Cap non-functional	Lock non-functional	Bolts missing (list quantity)	Tabs stripped (list quantity)	Tabs broken (list quantity)	Annular seal incomplete	Apron damaged	Rim/lid broken	Trip hazard	Below grade	Other (explain in notes)	Well not inspected (explain in notes)	NOTES - please note if cap or lock is replaced, if there are access issues associated with repairs, if traffic control is required, if stand pipe is damaged, or any other details not covered by checklist
MW-9	✓	-	-	-	-	-	-	-	-	-	-	-	-	
MW-8	✓	-	-	-	-	-	-	-	-	-	-	-	-	
NW-10	X	-	-	2	-	-	-	-	-	-	-	-	-	
MW-7	X	-	-	1	-	-	-	-	-	-	-	-	-	
MW-11	X	-	-	1	-	-	-	-	-	-	-	-	-	
MW-3	✓	-	-	-	-	-	-	-	-	-	-	-	-	
MW-4	✓	-	-	-	-	-	-	-	-	-	-	-	-	
MW-2	X	-	-	1	-	-	-	-	-	-	-	-	-	
EW-2R	✓	-	-	-	-	-	-	-	-	-	-	-	-	
EW-4	✓	-	-	-	-	-	-	-	-	-	-	-	-	water in well vault
MW-1	X	-	-	2	-	-	-	-	-	-	-	-	-	
MW-5	✓	-	-	-	-	-	-	-	-	-	-	-	-	
MW-6	✓	-	-	-	-	-	-	-	-	-	-	-	-	
EW-1R	✓	-	-	-	-	-	-	-	-	-	-	-	-	



Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: _____ Page: 1 of 1

Client: Montrose Environmental

Project Manager: Laura Skow

Address: 1631 E. Saint Andrew Place

Project Name: 5468, Springfield

City: Santa Ana State: CA Zip: 92705

Location: 5720 Main Street City, State: Springfield, WA

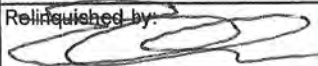
Phone: (714) 743-7855 / (714) 919-6533 Fax: _____

Collector: Eduardo Rivera Date of Collection: 9/24/24

Client Project # PROJ-027409 / PO#072380

Email: lskow@montrose-env.com

Sample Number	Date	Time	Sample Type	Container Type	Analytes												Field Notes		
					VOC 8260 - MTCA	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Lead			
1 MW-9	9/24/24	0911	GW	3 VOAs, Poly	X	X												X	
2 MW-8		0939	GW	3 VOAs, Poly	X	X												X	
3 MW-10		1000	GW	3 VOAs, Poly	X	X												X	
4 MW-11		1043	GW	3 VOAs, Poly	X	X												X	
5 MW-3		1145	GW	3 VOAs, Poly	X	X												X	
6 MW-4		1208	GW	3 VOAs, Poly	X	X												X	
7 MW-7		1019	GW	3 VOAs, Poly	X	X												X	
8 MW-2		1235	GW	3 VOAs, Poly	X	X												X	
9 EW-2R		1302	GW	3 VOAs, Poly	X	X												X	
10 EW-4		1325	GW	3 VOAs, Poly	X	X												X	
11 EB-1		1450	GW	3 VOAs, Poly	X	X												X	
12 EB-2			GW	3 VOAs, Poly	X	X												X	
13 DUP-1	na	na	GW	3 VOAs, Poly	X	X												X	
14 Trip Blank	na	na	GW	1 VOA	X														
15 MW-1	9/24/24	1355	GW	3 VOAs, Poly	X	X												X	
16																			
17																			

Relinquished by: 	Date / Time: <u>9/25/24</u>	Received by: <u>E. Santos</u>	Date / Time: <u>9/25/24 1335</u>	Sample Receipt		Remarks:
Relinquished by:	Date / Time:	Received by:	Date / Time:	Good Condition?	Y N	
Relinquished by:	Date / Time:	Received by:	Date / Time:	Cooler Temp.	°C	
Relinquished by:	Date / Time:	Received by:	Date / Time:	Sample Temp.	°C	
Relinquished by:	Date / Time:	Received by:	Date / Time:	Total Number of Containers		

AT: 1-Day 2-Day 5-DA

APPENDIX E

Montrose Groundwater Sampling Field Procedures

MONITORING WELL SAMPLING PROTOCOLS

The groundwater sampling procedures used by Montrose Environmental (Montrose) are designed to comply with local regulatory guidance and reflect the current professional standards and practices employed in the industry. A description of the groundwater sampling procedures is provided below.

Well Gauging

Initial site activities include determination of well locations based on a current site map. The area around each well is inspected to ensure that it is free of debris that could potentially fall into the well. A clean plastic trash bag or a piece of visqueen plastic sheeting is placed adjacent to the well to stage sampling equipment and supplies. Indications of well or well box damage are noted on appropriate field forms.

Prior to sampling, the construction details of each groundwater monitoring well to be sampled are reviewed to establish their respective depths and the length and placement of their screened intervals.

When the well is opened, the Technician will immediately measure the concentration of volatile organic vapors in the upper portion of the well casing with a photo-ionization detector (PID) calibrated to hexane. This measurement will guide the selection of respiratory protection equipment for sampling (as dictated by Montrose's Health and Safety Plan) at that particular well. Historical air monitoring data should also be referred to when selecting appropriate respiratory protection.

Prior to purging or sampling, initial static water levels are measured and recorded for all site wells. Depth to groundwater measurements accurate to 0.01 feet are obtained with an electronic sounding instrument that can also distinguish between liquid phase hydrocarbon (LPH) and water. The depths to LPH (if present), to water, and to the bottom of the well are measured from the top of the well casing (surveyors mark or notch if present). These measurements and the approximate thickness of potential LPH are recorded on the Fluid Level Measurement Form. Field forms are included in the Groundwater Monitoring Report as an Appendix.

As the measuring device is removed, it is thoroughly washed with a Liqui-nox/ water mixture and rinsed with distilled water. The tape is wiped dry with a paper towel as it is re-wound.

Note, wells that are found to contain LPH are not purged or sampled.

Traditional Well Purging

If purging is required, depth to groundwater measurements and well construction details are used to calculate the volume of water within each well casing.



During purging, the water quality parameters consisting of temperature, pH, conductivity, and turbidity are monitored as each well volume is removed. In some cases, additional water quality parameters, such as dissolved oxygen (DO) and oxidation-reduction potential (ORP), are also measured during purging. Purging continues until these parameters vary less than 10 percent from the previous reading, three well volumes are removed, or 80 percent of the well volume has been removed with no significant well recharge. Groundwater samples are collected without additional purging if the volume of groundwater in a well does not recover to at least 80 percent of its initial pre-purge measurement within two hours.

Depth to groundwater measurements, purge volumes, and water quality parameters obtained as each well is purged are recorded on Groundwater Monitoring Field Forms.

Instruments used for groundwater parameter measurements are calibrated daily in accordance with the manufacturer's instructions.

Purge water is generally collected in labeled 55-gallon, DOT-approved drums for disposal. Drums may be left on site in a secure location for disposal by others, or transported to a collection location for eventual transfer to a licensed treatment or recycling facility. In some cases, purge water is collected directly from the site by a licensed vacuum truck company, or treated on site by an active remediation system.

Low Flow, Minimal Drawdown Sampling

For non-LNAPL (floating product) sites: This procedure is designed to assist the user in taking representative groundwater samples from groundwater monitoring wells. The groundwater samples will be collected using low-flow (minimal drawdown) purging and sampling methods and is based upon U.S. EPA, Ground Water Issue, Publication #EPA/540/S-95/504, April 1996.

The field sampler's objective is to purge and sample the well so that the water that is discharged from the pump, and subsequently collected, is representative of the formation water from the aquifer's identified zone of interest.

1. Calibrate all field instruments at the start of each day's deployment per the instrument manufacturer's instruction. Record calibration data on the appropriate field calibration documentation form.
2. Begin sampling at the least contaminated and preferably upgradient well(s). Make notes describing the well condition, personnel, weather, location, etc.



3. Use only new, dedicated and/or clean (phosphate-free detergent, rinse and triple rinsed) equipment and sampling supplies. The water level meter, low-flow pump, discharge tubing and/or bailer will either be new or decontaminated before well gauging and sampling. Note - anything placed into a monitoring well must be CLEANED and DECONTAMINATED beforehand.
4. Measure the depth to water from the surveyed reference mark on the wellhead and record the measurement on the gauging and sampling sheet. Lock the water level meter in place so that the level can be monitored during purging and sampling. When placing the probe in the well, take precautions to not disturb or agitate the water. Where compounds of interest are known to concentrate near the top or the bottom the screen zone, locate the pump intake or end of tubing in the upper one-third or lower one-third of the interval, respectively.
5. Connect the compressed air source's airline to the pump controller's "AIR IN" connection (if utilizing a gas-engine operated generator, locate the generator at least 25 feet downwind from the wellhead). If using a peristaltic pump located at the surface, connect the flexible tubing to the pump drive head.
6. Connect the pump controller "AIR OUT" air-line to the bladder pump's air supply fitting at the wellhead (if using an electric pump, connect to generator's electric panel). If using a peristaltic pump, connect downhole tubing to flexible tubing in pump drive head.
7. Connect the pump discharge line to the in-line flow cell's "IN" fitting. If electric, same as above. If using a peristaltic pump, connect the discharge tubing to the "IN" fitting of the flow cell.
8. Connect the flow cell's "OUT" line and secure to drain the purge water into the purge water collection container.
9. Turn on or start the air supply to the pump. Set the pump controller settings to the documented settings for the specific well. Confirm the flow rate is equal to the well's established optimum flow rate, not to exceed 1 liter (1,000 ml) per minute. Modify as necessary and document any required modification. If electric, document MHz pump frequency for optimum flow rate.
10. Monitor the water level and confirm that the water level drawdown has stabilized within the well's allowable limits. Minimal drawdown is to be achieved which is less than 1/3-foot.



11. After a single pump-system's volume (bladder volume + discharge tubing volume, or for peristaltic pump downhole tubing volume + flexible tubing volume) has been adequately purged, read and record water quality field measurements every three to five minutes until all parameters have stabilized within their allowable ranges for at least three consecutive measurements. When stabilization has been achieved, sample collection may begin.
12. Disconnect the flow cell and its tubing from the pump line before collecting samples. Decrease the pump (MHz) rate to 100 millimeters per minute or less by lowering the controller's air pressure setting or MHz pump frequency prior to collecting samples for volatiles. If using a peristaltic pump, cut the discharge tubing between the pump head drive and the "IN" fitting on the flow cell. Place the samples in a cooler with enough ice to keep them at four degrees Celsius.
13. Once samples for volatiles have been collected, re-established pump flow rate to the original purge flow rate by inputting the documented controller settings for the well without the In-Line Flow Cell connected and collect remaining samples.
14. When all sample containers have been filled, make a final measurement of the well's Static Water Level and record the measurement on the gauging and sampling sheet.
15. Measure and record total purge volume collected. Consolidate generated purge water.
16. Remove and decontaminate the In-Line Flow Cell with phosphate-free detergent and triple rinse. If using a peristaltic pump, disconnect flexible tubing portion from the pump drive head. If dedicating the downhole tubing to the well, place tubing in the well in such a way that it will be easily retrievable during the next sampling event.
17. Disconnect the controller air supply to the pump. Disconnect electric cables to generator.
18. Secure the wellhead cover and secure with its lock. Move equipment to next well to be sampled.

Groundwater Sampling

After wells are purged, or not purged, according to agency-approved instructions or guidelines, groundwater samples are collected for laboratory analysis.



Groundwater samples will be collected from each well directly from the discharge tubing, of which the intake end is located within the screened interval. Groundwater samples should NOT be passed through the low-flow cell, or through any groundwater quality measuring device prior to collection. Groundwater brought to the surface is conveyed into appropriate laboratory prepared containers for each required analysis.

After filling, sample containers are immediately capped. Particular care is given to containers for volatile organic analysis (VOAs), which require filling to zero headspace and fitting with Teflon-sealed caps.

Each sample container is labeled with the project number (or site ID), well designation, sample date, and the samplers initials, and then immediately sealed in a zip lock bag and placed in a pre-chilled, insulated chest with ice. Samples remain chilled prior to and during transport to a state-certified laboratory for analysis. Sample container description and requested analyses are entered onto a chain-of-custody form to provide instruction for the laboratory. The chain-of-custody form accompanies the samples during transportation to provide a continuous record of possession from the point of collection to the laboratory. If a freight or overnight carrier transports the samples, the carrier is noted on the form along with the package tracking number.

For wells that are connected to a treatment system, samples are taken from the sample ports of actively pumping remediation wells.

Sequence of Gauging, Purging, and Sampling

The sequence in which monitoring activities are conducted is determined on a site-specific basis. In general, wells are gauged beginning with the least-affected well and ending with the well that has the highest contaminant concentration based on previous analytical results. After gauging is completed, wells are purged and/or sampled in the order of least-affected to most-affected wells.

Field QA/QC Procedures

A trip blank field sample is used to ensure that sample collection and handling procedures do not introduce contaminants into the groundwater samples. The trip blank is prepared by filling sample containers in the field with de-ionized water. The sample containers are labeled as "Trip Blank," placed in the cooler with other groundwater samples, and transported to the laboratory for analysis.

Silica Gel Cleanup of Groundwater Samples

Unless clearly specified by the project manager and subsequently noted on the chain-of-custody, groundwater samples that are to be analyzed for diesel and heavy oil using Methods NWTPH-Dx/Ox will not be 'cleaned-up' using silica gel or any other agents.

If samples that are to be analyzed for TPH-Dx/Ox are subjected to silica gel cleanup



procedures, that fact will be noted on the chain-of-custody, the analytical report and in the groundwater monitoring report.

Decontamination

To reduce the potential for cross-contamination between wells, strict isolation and decontamination procedures are observed.

Portable pumps are not used in wells with LPH. Technicians wear nitrile gloves during all gauging, purging and sampling activities. Gloves are changed between wells and more often if warranted. Any equipment that may come in contact with fluids is either dedicated to a particular well, decontaminated prior to each use, or discarded after a single use. Decontamination consists of a four-stage decontamination process: a phosphate-free detergent (Liqui-nox) wash, a double potable-water rinse, and a final deionized water rinse.

Exceptions

Additional tasks or non-standard procedures that may be requested or required for a particular site are documented on the appropriate field notes/forms.

January 2019 Version

