HALEY ALDRICH

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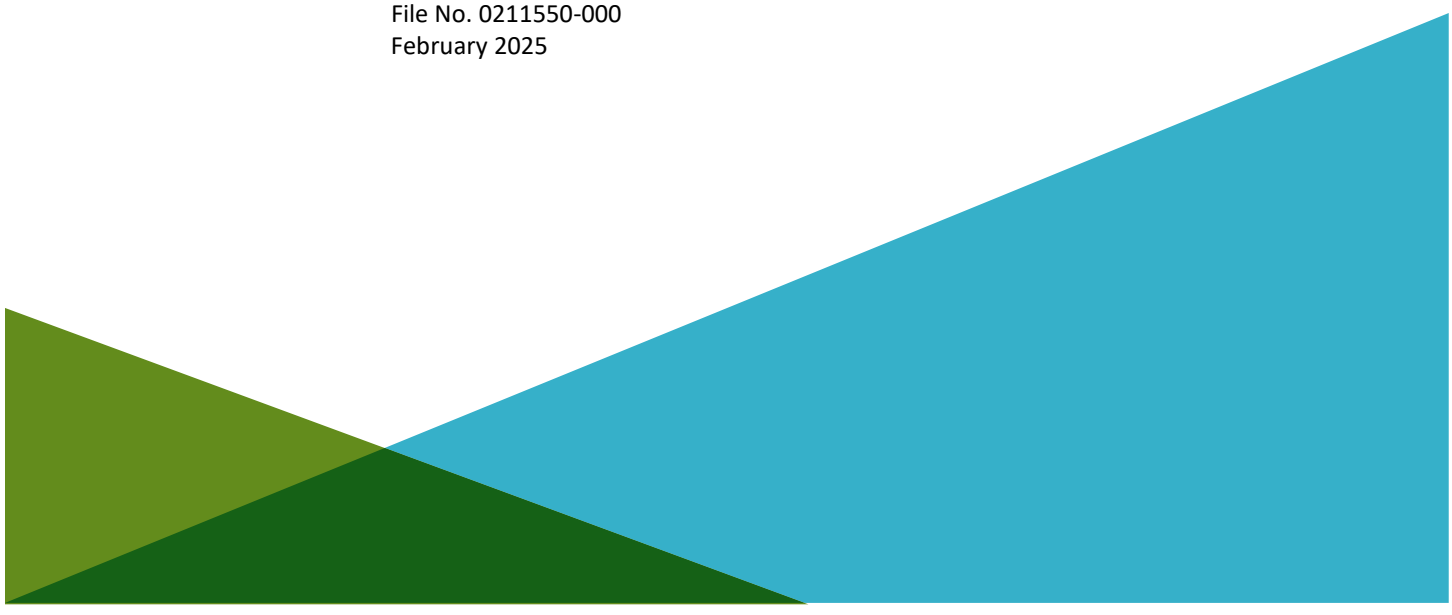
REPORT ON

SIMPLOT GROWERS SOLUTIONS
AUGUST 2024 GROUNDWATER MONITORING
WARDEN, WASHINGTON

by
Haley & Aldrich, Inc.
Spokane, Washington

for
J.R. Simplot Company
Boise, Idaho

File No. 0211550-000
February 2025



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SIGNATURE PAGE FOR

REPORT ON

SIMPLOT GROWERS SOLUTIONS
AUGUST 2024 GROUNDWATER MONITORING
WARDEN, WASHINGTON

PREPARED FOR

J.R. SIMPLOT COMPANY
BOISE, IDAHO

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1. Introduction

This semiannual monitoring report describes groundwater monitoring activities Haley & Aldrich, Inc. (Haley & Aldrich) conducted in August 2024, at the J.R. Simplot Company (Simplot) property operated by Simplot Growers Solution (SGS), located at 1800 West First Street in Warden, Washington (Site). The location of the Site is shown on "Vicinity Map," Figure 1. The Site is operated as an outlet for crop nutrition and agricultural seed. The Washington State Department of Ecology (Ecology) Facility Site ID is 2802409 and the Ecology Cleanup Site ID is 1618.

Haley & Aldrich conducted groundwater monitoring to assess natural attenuation of ethylene dibromide (EDB) concentrations in groundwater beneath and downgradient of the Site following Site cleanup. Locations of Site monitoring wells are shown on "Site Plan," Figure 2. Additional details regarding the background of the Site, subsurface geology, scope of services, field activities conducted, chemical analytical results, and our findings are summarized in the sections below.

2. Background

The Site is approximately 2.15 acres and is bounded to the east by a retail agricultural seed facility, the south by West First Street, west by a retail potato facility, and the north by a rail line and undeveloped land. Generally, the land surrounding the Site is commercial/industrial with an unlined irrigation canal, (the East Low Canal) and agricultural land to the north.

2.1 GEOLOGY AND HYDROGEOLOGY

The Site is located within the Columbia Plateau and regional geology is dominated by the Columbia River Basalt Group. The Site is underlain by approximately 43 feet of unconsolidated fill and sand material above basalt bedrock (HDR Engineering [HDR], 2018). Groundwater is encountered between 13 and 25 feet below ground surface and may vary seasonally. The nearest major natural surface water body in proximity to the Site is Warden Lake located to the west.

Multiple aquifers have been identified beneath the Site including a shallow aquifer within the unconsolidated material/upper layer of the weathered basalt bedrock and a deeper aquifer within the Wanapum and Grand Ronde formation of the Columbia River Basalt Group (HDR, 2018). Previous investigations by HDR indicate the man-made East Low Canal influences the shallow aquifer at the Site and acts as a losing stream when in use during the summer season.

2.2 PREVIOUS SITE ASSESSMENTS AND CLEANUP

In 1989, the City of Warden detected concentrations of EDB greater than the Site cleanup level (CUL) of 0.05 micrograms per liter (µg/L) in one of their production wells: Water Supply Well Number 4 (City Well No. 4). Following detection of EDB in City Well No. 4, the City of Warden detected concentrations of EDB in another production well: Water Supply Well Number 5 (City Well No. 5).

In 2004, the City of Warden installed a packer in City Well No. 5 to separate the shallow aquifer containing EDB from the lower aquifer, and in 2011, permanently decommissioned City Well No. 4. Phase I and II Investigations in 2007 and 2009, respectively, indicated the source of EDB contamination likely was from the Site. Between 1971 and 1984, SGS stored and blended EDB at the Site. Also, EDB may have potentially been used at the facility to the west (PGG, 2007).

In 2011, Ecology entered into an Agreed Order (Agreed Order [AO] 8241) with SGS and required SGS to conduct a Remedial Investigation (RI) and Feasibility Study (FS) for the Site. HDR began RI/FS activities in 2011 and submitted a draft RI/FS to Ecology in 2014. RI activities included: a geophysical investigation, advancing seven soil borings, installing six monitoring wells and conducting pumping tests on City Well No. 5. Results of the RI indicate EDB was present in concentrations greater than applicable cleanup levels in soil and groundwater beneath the Site. Findings from the FS recommended remedial actions that included soil excavation, *ex-situ* treatment of contaminated soil by soil vapor extraction (SVE), monitoring natural attenuation of EDB in groundwater, and implementing institutional controls at the Site.

In 2019, Ecology entered into an AO (AO No. DE 16890) with SGS to implement *ex-situ* treatment of contaminated soil by SVE. During the winter of 2021, SGS excavated and stockpiled approximately 6,500 to 7,200 cubic yards of contaminated soil from the Site. In spring of 2022, SGS began treating the contaminated soil on site. Soil treatment was completed in late 2022, and the treated soil was backfilled in previously excavated areas.

In 2023, HDR drafted a "Groundwater Monitoring Well Construction and Monitoring Plan" to guide semiannual groundwater compliance monitoring and monitoring well installations post remediation. There currently are 11 monitoring wells available for compliance monitoring; however, one of these wells (MW-9S) does not produce water.

3. Scope of Services

Haley & Aldrich groundwater monitoring scope of services includes gauging depth to groundwater, collecting groundwater samples using low flow/low stress techniques, submitting groundwater samples for chemical analyses, and reporting. During the August 2024 monitoring event, we completed the following activities:

- Measured and recorded depth to water (DTW) relative to top of casing in monitoring wells MW-1, -2, -5SR, -5DR, -6S, -7S, -7D, -8S, -11S, and -12S;
- Deployed five In-Situ Rugged TROLL 100 pressure transducers (transducers) and one In-Situ BaroTROLL transducer (BaroTROLL). Programmed the transducers to record groundwater elevations and barometric pressures once every six hours.
- Collected groundwater samples from MW-1, -2, -5SR, -5DR, -6S, -7S, -7D, -8S, -11S, and -12S;
- Collected water samples from previously generated Investigation-Derived Waste (IDW) staged on site;
- Submitted groundwater and quality control samples to Eurofins Environment Testing Northwest LLC, (Eurofins) in Spokane Valley, Washington for EDB analysis;
- Compared groundwater analytical results to the EDB Site CUL of 0.05µg/L, and
- Prepared this report.

4. Field Activities

Haley & Aldrich completed groundwater monitoring activities on 21 and 22 August 2024. Haley & Aldrich collected groundwater samples from MW-1, -2, -5SR, -5DR, -6S, -7S, -7D, -8S, -11S, and -12S. Monitoring wells MW-3 and MW-10S were not found and likely have been paved over. Monitoring well MW-9S was gauged but was dry; therefore, we did not sample this well. Monitoring well locations are shown on Figure 2. Field activities completed are discussed in more detail in the sections below.

4.1 GROUNDWATER ELEVATION MONITORING

Prior to sampling, Haley & Aldrich measured DTW in each well using a Waterline electronic water level indicator probe. Haley & Aldrich referenced DTW measurements to the surveyed top of casing (TOC) elevations and recorded the measurements in a field notebook (TOC elevations are referenced to the feet above mean sea level datum). We calculated groundwater elevations by subtracting the measured DTW from the TOC elevation in each well; our calculated elevations are provided in "Depth to Groundwater, Elevations, and Water Quality Parameters," Table 1.

4.2 GROUNDWATER SAMPLING

After measuring DTW, Haley & Aldrich purged each well using a stainless-steel submersible pump fitted with new, disposable, polyethylene tubing and low flow/low stress techniques. We placed the tubing inlet at approximately the middle of the wetted well screen. During purging, we measured and recorded water quality parameters (pH, temperature, conductivity, dissolved oxygen, turbidity, and oxidation-reduction potential) using a Pro DSS YSI multimeter (YSI) equipped with a flow-through cell to. Purge water was collected into one, 55-gallon drum, and staged in the storage building at the Site.

Haley & Aldrich collected groundwater samples from each well after the water quality parameters reached stabilization; wells were considered stabilized in accordance with the "Groundwater Monitoring Well Construction and Monitoring Plan" (HDR, 2023). Stabilized water quality parameter measurements prior to sampling are provided in Table 1. We collected groundwater samples first by removing the sample tubing from the YSI and by allowing the groundwater to freely flow from the sample tubing into laboratory-provided, 40 milliliter volatile organic analysis (VOA) sample containers. Filled VOA sample containers were placed into zip-top bags and stored in an insulated cooler with ice until hand delivered to Eurofins under chain-of-custody protocols.

4.2.1 Quality Assurance/Quality Control Sampling

Haley & Aldrich also collected an equipment blank, field blank, matrix spike/matrix spike duplicate (MS/MSD), and duplicate sample for data quality control and assurance purposes. Eurofins provided a 1-liter container filled with deionized (DI) water and additional sample containers to collect the equipment blank and field blank. After we finished collecting the primary sample from MW-1, we collected a field and equipment blank sample. The field blank was collected by pouring DI water directly into a VOA sample container. The equipment blank was collected by pouring DI water over the stainless-steel submersible pump and allowing the DI water to flow freely into the VOA sample container. After collecting the primary sample from MW-6S, we collected a duplicate sample and labeled it MW-600S.

4.3 TRANSDUCER DEPLOYMENT

After collecting groundwater samples, Haley & Aldrich deployed transducers in monitoring wells MW-1, -5SR, -5DR, -6S, and -7S. We deployed the transducers approximately 1 foot above the bottom of each well. We deployed the BaroTROLL within the well casing of MW-5SR near the top of the well. The BaroTROLL and transducers are programmed to record pressure in pounds per square inch (psi) and temperature in degrees Celsius every six hours.

4.4 IDW SAMPLING

Two, full, 55-gallon steel drums containing contaminated water from previous monitoring events completed by others are stored in a building on Site. Additionally, Haley & Aldrich brought a new 55-gallon steel drum to store purge water during the August 2024 monitoring event. After the monitoring wells were purged and sampled, Haley & Aldrich stored the collected purge water in the new 55-gallon drum. We then collected one sample from each of the two full drums using a peristaltic pump. We identified and labeled each full drum and corresponding sample “Drum #1” and “Drum #2”. We submitted each sample to Eurofins for EDB analysis; analytical results are discussed in Section 6 of this report. The partially filled drum from the August 2024 event was not sampled but remains on Site for future use.

5. Groundwater Elevation Monitoring Results

Water level measurements recorded on 21 and 22 August 2024 indicate that depth to groundwater ranged between 13.95 and 24.71 feet below the TOC in MW-1 and MW-11S, respectively. Calculated groundwater elevations ranged between 1,225.33 and 1,231.67 feet in MW-8S and MW-1, respectively. Calculated groundwater elevations from the August 2024 event indicate groundwater beneath the Site generally was flowing south at approximately 177 degrees from north, and the groundwater gradient was approximately 0.008 feet per foot (feet/foot). Calculated groundwater elevations are summarized in Table 1 and are presented as inferred groundwater contours in "Inferred Groundwater Contours - August 2024," Figure 3. The inferred contours indicate groundwater flows to the south, south of the East Low Canal.

6. Analytical Results

Haley & Aldrich submitted a total of 16 groundwater samples to Eurofins for analyses of EDB by U.S. Environmental Protection Agency (EPA) Method 8011. In addition, we submitted one equipment blank, a field blank, an MS/MSD, and one duplicate sample to Eurofins for analyses of EDB by EPA Method 8011. Analytical results are included in the attached "Groundwater Analytical Results," Table 2. Results for the EDB analysis are summarized below. In addition, we compared EDB results from the August 2024 event to the January 2024 event conducted by HDR. The laboratory analytical report for the August 2024 event is provided in Appendix A.

6.1 DATA VALIDATION

Following receipt of analytical results, we validated the data for viability and usability. Our data validation followed USEPA guidelines, specifically the National Functional Guidelines for Organic Data Review. The sample data were reported to the laboratory reporting limit (RL) and qualified per the laboratory's standard operating procedures. The results met the data quality objectives and are considered usable. The analytical results are detailed in the sections below and our "Data Usability Summary Report" is provided in Appendix B.

6.2 GROUNDWATER

Groundwater samples collected from MW-5SR, -6S and -11S contained EDB concentrations of 10, 0.079, and 0.24 µg/L, respectively; these detected concentrations are greater than the Site CUL but are at least an order of magnitude less that concentrations detected during the January 2024 event. EDB was not detected at concentrations greater than the method reporting limit of 0.010 µg/L in the remaining monitoring wells. Analytical results are summarized in Table 2 and shown on "Inferred Groundwater Contours with EDB Concentrations – August 2024," Figure 4.

6.3 INVESTIGATIVE DERIVED WASTE SAMPLE RESULTS

Analytical results indicate IDW samples collected during the August 2024 monitoring event contained EDB at concentrations greater than the Site CUL. Concentrations of EDB in IDW samples Drums #1 and #2, were 0.25 and 1.6 µg/L, respectively. Based on these results, we will coordinate a subcontractor to generate a waste profile and properly dispose of the IDW drums.

7. Findings

Groundwater flow direction and gradient at the Site is likely influenced locally by the East Low Canal north of the property. Based on conversations with the East Columbia Basin Irrigation District, we understand the East Low Canal is unlined and approximately 19 feet deep north of the Site. Inferred groundwater contours from the August 2024 event indicate the canal acts as a losing stream to the shallow aquifer beneath the Site. As a losing stream, the canal acts as a local groundwater boundary and directs flow away from the canal to the south (see Figure 3) and likely to the north. Therefore, when the canal is flowing, EDB-contaminated groundwater beneath the Site likely will flow south, away from City Well No.4 and No. 5. Monitoring seasonal fluctuations in groundwater elevations will be required to support this conclusion and to assess potential variation in groundwater flow direction(s).

Concentrations of EDB in groundwater samples collected from MW-5SR, -6S, and -11s were greater than the Site CUL during the August 2024 groundwater sampling events. However, EDB concentrations ranged between 2 and 26.8 µg/L in MW-6S during monitoring events conducted between January 2012 and December 2017. After remedial actions were completed in 2022 concentrations of EDB in MW-6S have ranged between 0.079 and 0.10 indicating remedial activities at the Site have resulted in improved groundwater conditions.

During the August 2024 event, concentrations of EDB were present in monitoring wells MW-11S and MW-6S along the southern Site boundary at concentrations greater than the CUL. The only monitoring point further downgradient of the Site is monitoring well MW-9S; however, MW-9S has been a dry well since first constructed and therefore cannot be sampled to assess groundwater conditions. We recommend that Simplot install a new monitoring well south of the Site to monitor groundwater conditions. We also recommend Simplot install a monitoring well near MW-10S to monitor groundwater conditions cross gradient of the Site.

References

1. HDR Engineering, 2018. “Final Remedial Investigation and Feasibility Study Report.” Simplot Grower Solutions. September.

2. HDR Engineering, 2024. “January 2024 Semi-Annual Groundwater Monitoring Report.” Simplot Grower Solutions Facility CSID NO. 1618. March.

3. Pacific Groundwater Group, 2007. “City of Warden Preliminary Investigation of Ethylene Dibromide Contamination”. Washington State Department of Ecology. April.

TABLES

TABLE 1
DEPTH TO GROUNDWATER, ELEVATIONS, AND WATER QUALITY PARAMETERS
J.R. SIMPLOT GROWERS SOLUTIONS PROPERTY
WARDEN, WASHINGTON

Monitoring Well	Date of Sampling	Top of Casing Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)	Temperature (°C)	pH	Specific Conductivity (mS/cm)	ORP (mV)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
MW-1	8/22/2024	1245.62	13.95	1231.67	16.7	7.37	0.342	157.0	3.72	0.16
MW-2	8/21/2024	1247.09	16.66	1230.43	16.6	8.22	0.176	91.5	6.75	2.11
MW-5SR	8/22/2024	1249.41	23.33	1226.08	15.5	6.85	2.891	131.8	18.18	4.16
MW-5DR	8/21/2024	1249.43	23.40	1226.03	16.8	7.98	0.209	132.8	72.91	0.94
MW-6S	8/22/2024	1247.86	22.50	1225.36	15.9	6.98	2.746	134.4	12.41	2.26
MW-7S	8/22/2024	1250.86	23.30	1227.56	16.8	8.07	0.258	118.2	35.89	9.10
MW-7D	8/22/2024	1251.01	23.53	1227.48	15.8	8.20	0.153	118.0	88.96	9.14
MW-8S	8/21/2024	1248.84	23.51	1225.33	17.3	7.37	1.724	155.4	9.48	9.24
MW-11S	8/21/2024	1250.06	24.71	1225.35	20.5	6.57	2.273	200.9	31.59	6.45
MW-12S	8/21/2024	1249.44	23.79	1225.65	16.9	7.51	2.462	147.4	35.16	3.26

Notes:

Depth to water is referenced from top of casing

Top of casing elevation previously measured by HDR in January 2024.

-- = not measured/calculated

°C = degrees Celsius

DO = dissolved oxygen

mg/L = milligrams per liter

mS/cm = millisiemens per centimeter

mV = millivolts

MW = monitoring well

amsl = above mean sea level

NTU = nephelometric turbidity units

ORP = oxidation-reduction potential

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
J.R. SIMPLOT GROWERS SOLUTIONS PROPERTY
WARDEN, WASHINGTON

Sample ID	Sample Date	Analyte	
		EDB (µg/L)	Q
MW-1	1/1/2012	<0.010	
	4/1/2012	<0.0098	
	7/1/2012	<0.0097	
	10/1/2012	<0.010	
	1/1/2013	<0.010	
	7/1/2013	<0.0094	
	10/13/2013	<0.0098	
	12/1/2017	<0.0098	
	11/1/2023	<0.0025	
	1/1/2024	**0.0036**	
	8/22/2024	<0.010	U
MW-2	1/1/2012	<0.0099	
	4/1/2012	<0.0098	
	7/1/2012	<0.0097	
	10/1/2012	<0.010	
	1/1/2013	<0.010	
	7/1/2013	<0.0095	
	10/13/2013	<0.0098	
	12/1/2017	<0.0098	
	11/1/2023	<0.0025	
	1/1/2024	<0.0025	
	8/22/2024	<0.010	U
MW-3[1]	1/1/2012	<0.010	
	4/1/2012	<0.097	
	7/1/2012	<0.0099	
	10/1/2012	<0.010	
	1/1/2013	<0.010	
	7/1/2013	<0.0096	
	10/13/2013	<0.0099	
	12/1/2017	<0.0097	
MW-4[3]	1/1/2012	<0.010	
	7/1/2012	<0.0097	
	10/1/2012	<0.010	
	1/1/2013	<0.010	
	7/1/2013	<0.0097	
	10/13/2013	<0.0098	
MW-5S[3]	1/1/2012	**234**	
	4/1/2012	**16.1**	
	7/1/2012	**9.1**	
	10/1/2012	**22.3**	
	1/1/2013	**14.5**	
	7/1/2013	**5.7**	
	10/13/2013	**63**	
	12/1/2017	**151**	
MW-5SR[3]	11/1/2023	<0.0025	
	1/1/2024	**24**	
	8/22/2024	**10**	
MW-5D[3]	1/1/2012	**0.27**	
	4/1/2012	**0.01**	
	7/1/2012	<0.0097	
	10/1/2012	<0.010	
	1/1/2013	<0.010	
	7/1/2013	<0.0096	
	10/13/2013	**0.01**	
	12/1/2017	<0.0098	
MW-5DR[3]	11/1/2023	<0.0025	
	1/1/2024	**0.039**	
	8/22/2024	<0.010	U
MW-6S	1/1/2012	**10.9**	
	4/1/2012	**8.7**	
	7/1/2012	**26.8**	
	10/1/2012	**15.4**	
	1/1/2013	**4.2**	
	7/1/2013	**2.00**	
	10/13/2013	ND	
	12/1/2017	**0.35**	
	11/1/2023	**0.10**	
	1/1/2024	**0.10**	
	8/22/2024	**0.079**	

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
J.R. SIMPLOT GROWERS SOLUTIONS PROPERTY
WARDEN, WASHINGTON

Sample ID	Sample Date	Analyte	
		EDB (µg/L)	Q
MW-7S	1/1/2012	<0.0099	
	4/1/2012	**0.011**	
	7/1/2012	<0.0099	
	10/1/2012	<0.010	
	1/1/2013	<0.010	
	7/1/2013	<0.0097	
	10/13/2013	<0.0098	
	12/1/2017	<0.0098	
	11/1/2023	<0.0025	
	1/1/2024	<0.0025	
	8/22/2024	<0.010	U
MW-7D	1/1/2012	<0.009	
	4/1/2012	**0.011**	
	7/1/2012	<0.0098	
	10/1/2012	<0.010	
	1/1/2013	<0.010	
	7/1/2013	<0.0095	
	10/13/2013	<0.0099	
	12/1/2017	<0.0096	
	11/1/2023	<0.0025	
	1/1/2024	<0.0025	
	8/22/2024	<0.010	U
MW-8S	1/1/2013	<0.010	
	7/1/2013	<0.0097	
	10/13/2013	<0.0010	
	12/1/2017	<0.0098	
	11/1/2023	<0.0025	
	1/1/2024	<0.0025	
	8/22/2024	<0.010	
MW-10S[1]	10/13/2013	<0.0097	
	12/1/2017	<0.0098	
MW-11S	11/1/2023	**15**	
	1/1/2024	**48**	
	8/22/2024	**0.24**	
MW-12S	11/1/2023	**0.028**	
	1/1/2024	**0.0051**	
	8/22/2024	<0.010	U
Site Cleanup Level	**0.05 µg/L**		

Notes:

[1] MW-3 and MW-10 were not sampled in November 2023, January, and

[2] MW-9S was dry.

[3] MW-4, MW-5D, and MW-5S were abandoned. MW-5SR and MW-5DR

Samples collected during August 2024 event were collected by Haley & Aldrich, Inc. and were analyzed by Eurofins Environment Northwest, LLC Spokane, WA for Ethylene Dibromide (EDB) by Environmental Protection Agency (EPA)Method 8011.

Samples prior to August 2024 were collected by HDR and were analyzed by Eurofins Environment Northwest, LLC Spokane, WA for Ethylene Dibromide (EDB) by Environmental Protection Agency

*Results in **bold** were detected*

Detected concentration greater than Site cleanup level

-- = Not applicable

ND = Not detected at or above Reporting Limit

NS = Not sampled

Results shown in *µ g/L = micrograms per liter*

U= Analyte not detected at a concentration greater than the method d

FIGURES

MAP SOURCE: ESRI
SITE COORDINATES: 46°58'11"N, 119°03'37"W

HALEY ALDRICH

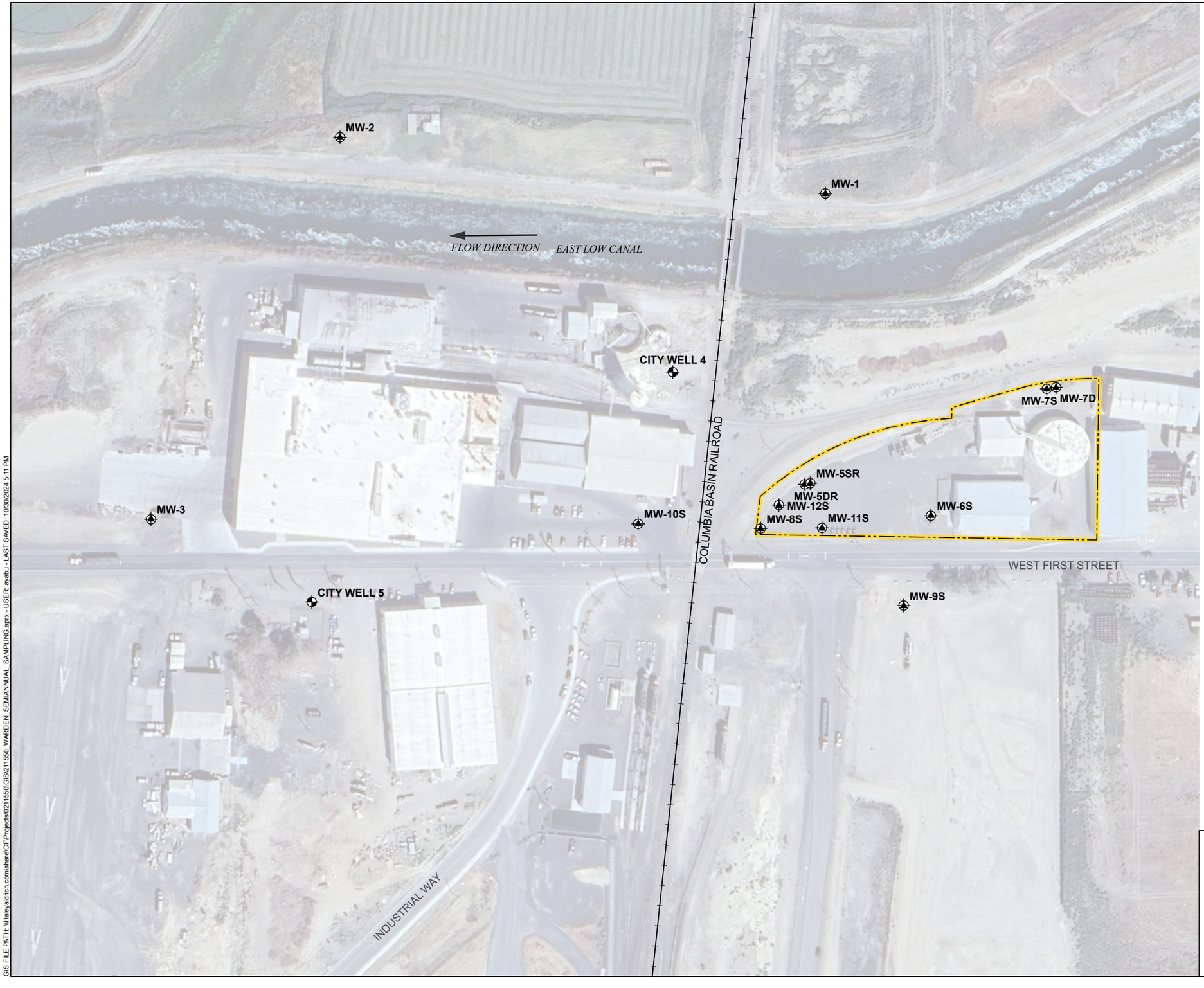
J.R. SIMPLOT COMPANY
WARDEN SEMIANNUAL GROUNDWATER MONITORING
1800 WEST 1ST STREET
WARDEN, WASHINGTON

VICINITY MAP

APPROXIMATE SCALE: 1 IN = 2000 FT
OCTOBER 2024

FIGURE 1

GIS: \\haleyaldrich.com\share\CF\Projects\02\211550\GIS\211550_WARDEN.aprx - tciskowski - 9/20/2024 3:06 PM



LEGEND

- MONITORING WELL
- WATER SUPPLY WELL
- RAILROAD
- SITE BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. ASSESSOR PARCEL DATA SOURCE: GRANT COUNTY, 2024
3. GROUNDWATER MONITORING WELL DATA SOURCE: SEMIANNUAL GROUNDWATER MONITORING REPORT, HDR ENGINEERING, JANUARY 2024
4. AERIAL IMAGERY SOURCE: GOOGLE, 2024

N

0 150 300

SCALE IN FEET

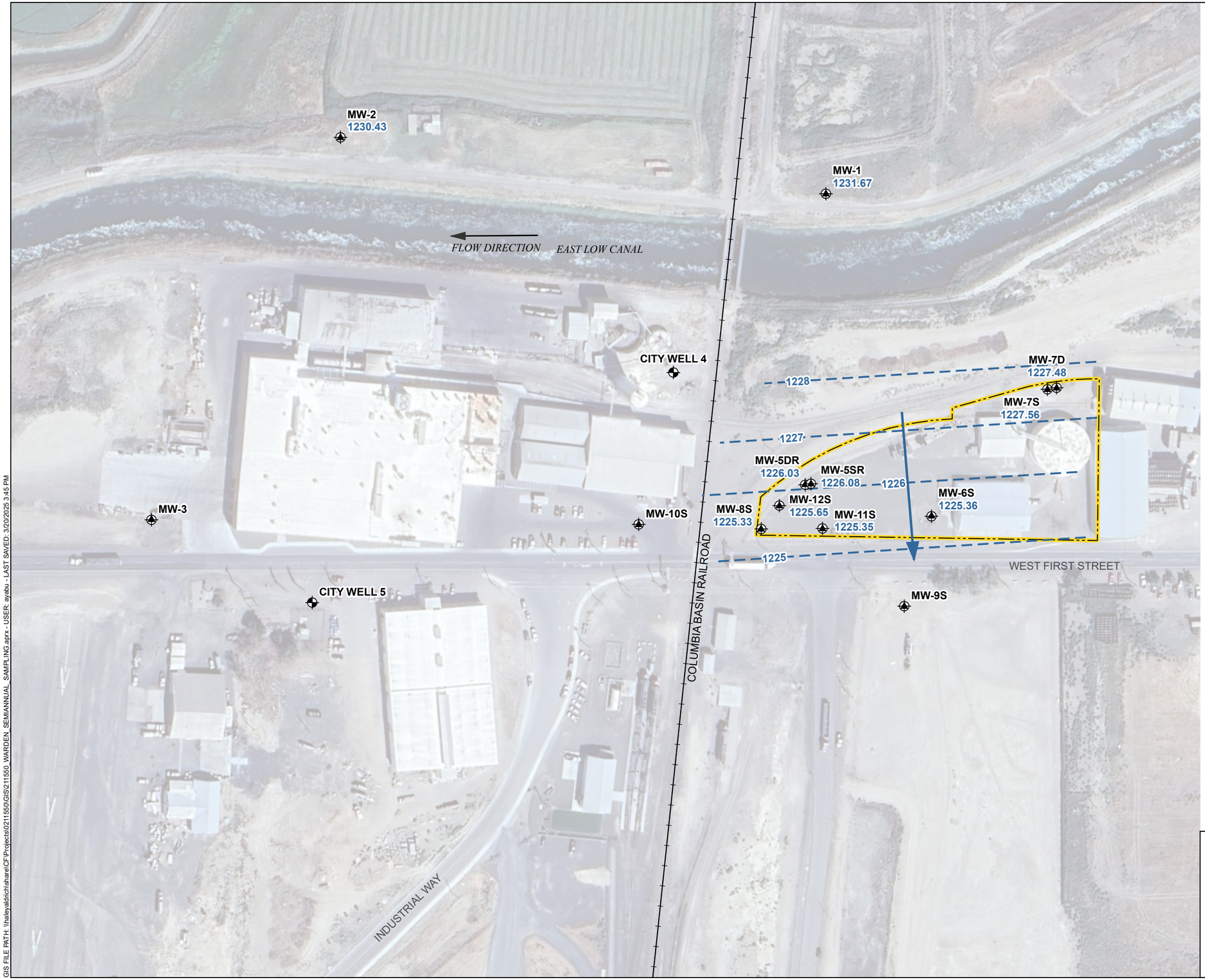
HALEY ALDRICH

J.R. SIMPLOT COMPANY
WARDEN SEMIANNUAL GROUNDWATER MONITORING
1800 WEST 1ST STREET
WARDEN, WASHINGTON

SITE PLAN

OCTOBER 2024

FIGURE 2



LEGEND

- MONITORING WELL WITH GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- WATER SUPPLY WELL
- GENERAL GROUNDWATER FLOW DIRECTION
- INFERRED GROUNDWATER ELEVATION CONTOUR
- RAILROAD
- SITE BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. MONITORING WELLS MW-3 AND MW-10S ARE INACCESSIBLE
3. GROUNDWATER MONITORING WELL DATA SOURCE: SEMIANNUAL GROUNDWATER MONITORING REPORT, HDR ENGINEERING, JANUARY 2024
4. AERIAL IMAGERY SOURCE: GOOGLE, 2024

N

0 150 300
SCALE IN FEET

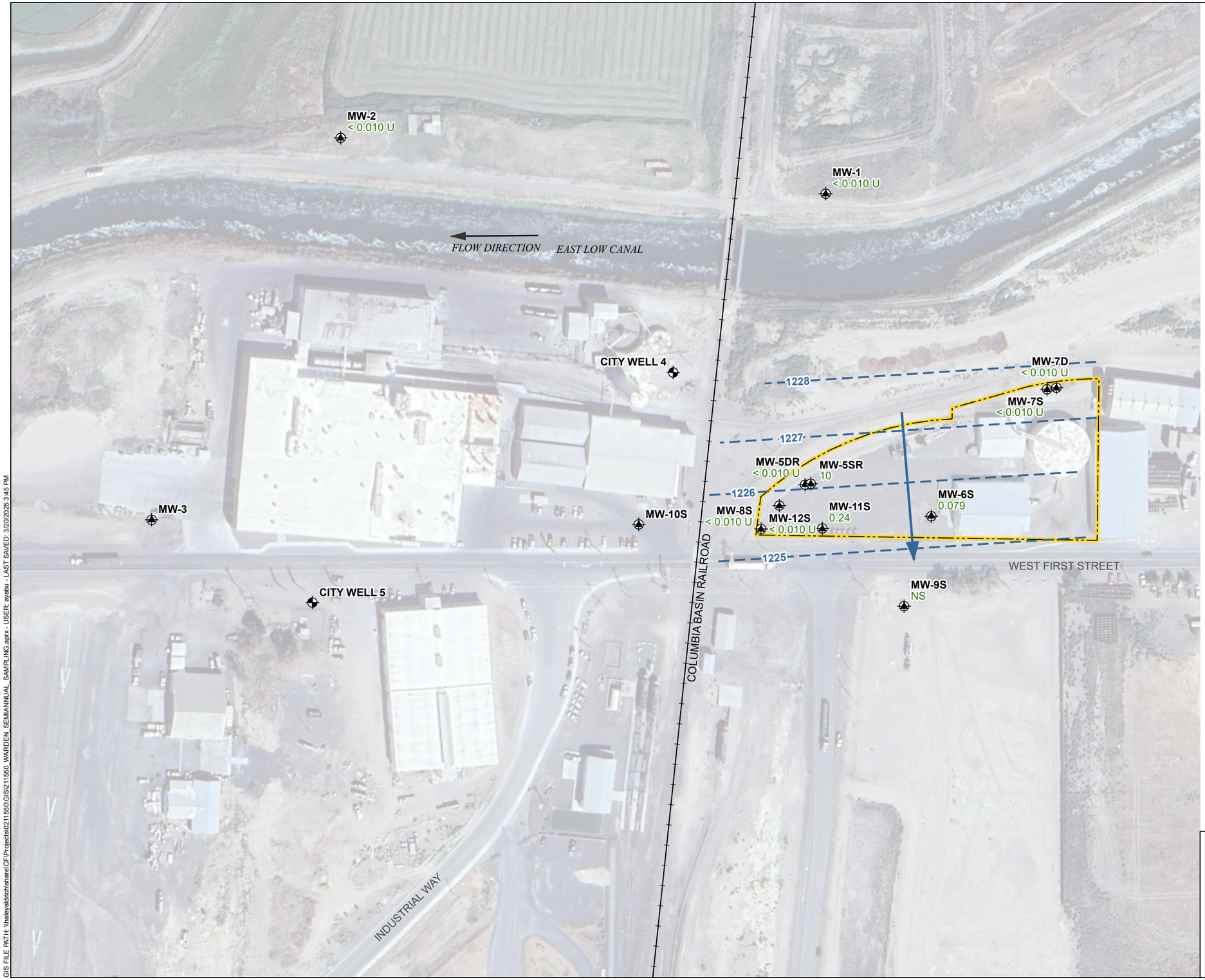
HALEY ALDRICH

J.R. SIMPLOT COMPANY
WARDEN SEMIANNUAL GROUNDWATER MONITORING
1800 WEST 1ST STREET
WARDEN, WASHINGTON

INFERRED GROUNDWATER CONTOURS – AUGUST 2024

APRIL 2025

FIGURE 3



LEGEND

- MONITORING WELL WITH ETHYLENE DIBROMIDE (EDB) CONCENTRATION IN MICROGRAMS PER LITER
- WATER SUPPLY WELL
- GENERAL GROUNDWATER FLOW DIRECTION
- INFERRED GROUNDWATER ELEVATION CONTOUR
- RAILROAD
- SITE BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. DEFINITIONS:
U = BELOW LABORATORY METHOD DETECTION LIMIT OF 0.010
NS = NOT SAMPLED

3. MW-3, MW-9S, AND MW-10S WERE NOT SAMPLED. MW-3 AND MW-10S WERE INACCESSIBLE AND MW-9S WAS DRY.

4. GROUNDWATER MONITORING WELL DATA SOURCE: SEMIANNUAL GROUNDWATER MONITORING REPORT, HDR ENGINEERING, JANUARY 2024

5. AERIAL IMAGERY SOURCE: GOOGLE, 2024

N

0 150 300
SCALE IN FEET

HALEY ALDRICH

J.R. SIMPLOT COMPANY
WARDEN SEMIANNUAL GROUNDWATER MONITORING
1800 WEST 1ST STREET
WARDEN, WASHINGTON

INFERRED GROUNDWATER CONTOURS WITH EDB CONCENTRATIONS - AUGUST 2024

APRIL 2025

FIGURE 4

GIS FILE PATH: \\haleyaldrich\share\CF\Projects\0211500\GIS\211550_WARDEN_SEMIANNUAL_SAMPLING.aprx - USER: ayabu - LAST SAVED: 3/20/2025 3:45 PM

APPENDIX A
Laboratory Reports

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11 12

ANALYTICAL REPORT

PREPARED FOR

Attn: Ward McDonald
Haley & Aldrich, Inc.
505 W Riverside Ave
Suite 205
Spokane, Washington 99201

Generated 8/27/2024 1:43:41 PM

JOB DESCRIPTION

Simplot Warden Groundwater Sampling/0211550-000

JOB NUMBER

590-26624-1

Eurofins Spokane
11922 East 1st Ave
Spokane WA 99206

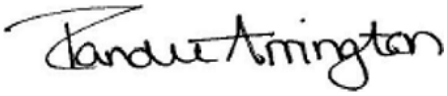
See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



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8/27/2024 1:43:41 PM

Authorized for release by
Randee Arrington, Business Unit Manager
Randee.Arrington@et.eurofinsus.com
(509)924-9200

Table of Contents

Job ID: 590-26624-1 Eurofins Spokane

Job Narrative
590-26624-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 8/23/2024 8:52 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.3°C.

GC Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Sample Summary

Client: Haley & Aldrich, Inc.
Job ID: 590-26624-1
Project/Site: Simplot Warden Groundwater
Sampling/0211550-000

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-26624-1	MW-1	Water	08/22/24 12:50	08/23/24 08:52
590-26624-2	MW-2	Water	08/21/24 15:40	08/23/24 08:52
590-26624-3	MW-5SR	Water	08/22/24 07:50	08/23/24 08:52
590-26624-4	MW-5DR	Water	08/21/24 13:50	08/23/24 08:52
590-26624-5	MW-6S	Water	08/22/24 09:20	08/23/24 08:52
590-26624-6	MW-600S	Water	08/22/24 09:50	08/23/24 08:52
590-26624-7	MW-7S	Water	08/22/24 10:50	08/23/24 08:52
590-26624-8	MW-7D	Water	08/22/24 11:35	08/23/24 08:52
590-26624-9	MW-8S	Water	08/21/24 10:15	08/23/24 08:52
590-26624-10	MW-11S	Water	08/21/24 13:00	08/23/24 08:52
590-26624-11	MW-12S	Water	08/21/24 11:50	08/23/24 08:52
590-26624-12	Drum #1	Water	08/22/24 13:50	08/23/24 08:52
590-26624-13	Drum #2	Water	08/22/24 13:55	08/23/24 08:52
590-26624-14	Field Blank	Water	08/22/24 13:00	08/23/24 08:52
590-26624-15	Equipment Blank	Water	08/22/24 13:05	08/23/24 08:52
590-26624-16	Trip Blank	Water	08/19/24 00:00	08/23/24 08:52

Client: Haley & Aldrich, Inc.
Job ID: 590-26624-1
Project/Site: Simplot Warden Groundwater
Sampling/0211550-000

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client: Haley & Aldrich, Inc.
Project/Site: Simplot Warden Groundwater
Sampling/0211550-000

Job ID: 590-26624-1

Client Sample ID: MW-1

Lab Sample ID: 590-26624-1
Matrix: Water
Date Collected: 08/22/24 12:50
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:31	08/26/24 17:37	1

Client Sample ID: MW-2

Lab Sample ID: 590-26624-2
Matrix: Water
Date Collected: 08/21/24 15:40
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:31	08/26/24 17:53	1

Client Sample ID: MW-5SR

Lab Sample ID: 590-26624-3
Matrix: Water
Date Collected: 08/22/24 07:50
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	**10**		1.0		ug/L		08/26/24 13:31	08/27/24 09:40	100

Client Sample ID: MW-5DR

Lab Sample ID: 590-26624-4
Matrix: Water
Date Collected: 08/21/24 13:50
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:31	08/26/24 18:26	1

Client Sample ID: MW-6S

Lab Sample ID: 590-26624-5
Matrix: Water
Date Collected: 08/22/24 09:20
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	**0.079**		0.010		ug/L		08/26/24 13:31	08/26/24 18:43	1

Client Sample ID: MW-600S

Lab Sample ID: 590-26624-6
Matrix: Water
Date Collected: 08/22/24 09:50
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	**0.075**		0.010		ug/L		08/26/24 13:31	08/26/24 19:33	1

Client Sample ID: MW-7S

Lab Sample ID: 590-26624-7
Matrix: Water
Date Collected: 08/22/24 10:50
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:31	08/26/24 20:06	1

Client: Haley & Aldrich, Inc.
Project/Site: Simplot Warden Groundwater
Sampling/0211550-000

Job ID: 590-26624-1

Client Sample ID: MW-7D
Lab Sample ID: 590-26624-8
Date Collected: 08/22/24 11:35
Matrix: Water
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:31	08/26/24 20:23	1

Client Sample ID: MW-8S
Lab Sample ID: 590-26624-9
Date Collected: 08/21/24 10:15
Matrix: Water
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:31	08/26/24 20:39	1

Client Sample ID: MW-11S
Lab Sample ID: 590-26624-10
Date Collected: 08/21/24 13:00
Matrix: Water
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	**0.24**		0.010		ug/L		08/26/24 13:31	08/26/24 20:56	1

Client Sample ID: MW-12S
Lab Sample ID: 590-26624-11
Date Collected: 08/21/24 11:50
Matrix: Water
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:31	08/26/24 21:13	1

Client Sample ID: Drum #1
Lab Sample ID: 590-26624-12
Date Collected: 08/22/24 13:50
Matrix: Water
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	**0.25**		0.010		ug/L		08/26/24 13:31	08/26/24 21:29	1

Client Sample ID: Drum #2
Lab Sample ID: 590-26624-13
Date Collected: 08/22/24 13:55
Matrix: Water
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	**1.6**		0.10		ug/L		08/26/24 13:31	08/27/24 09:57	10

Client Sample ID: Field Blank
Lab Sample ID: 590-26624-14
Date Collected: 08/22/24 13:00
Matrix: Water
Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:31	08/26/24 22:03	1

Client: Haley & Aldrich, Inc.
Project/Site: Simplot Warden Groundwater
Sampling/0211550-000

Job ID: 590-26624-1

Client Sample ID: Equipment Blank

Lab Sample ID: 590-26624-15

Date Collected: 08/22/24 13:05

Matrix: Water

Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:31	08/26/24 22:19	1

Client Sample ID: Trip Blank

Lab Sample ID: 590-26624-16

Date Collected: 08/19/24 00:00

Matrix: Water

Date Received: 08/23/24 08:52

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:34	08/26/24 22:36	1

Client: Haley & Aldrich, Inc.
Project/Site: Simplot Warden Groundwater
Sampling/0211550-000

Job ID: 590-26624-1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-49220/2-A
Matrix: Water
Analysis Batch: 49226

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 49220

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010		ug/L		08/26/24 13:31	08/26/24 17:03	1

Lab Sample ID: LCS 590-49220/3-A
Matrix: Water
Analysis Batch: 49226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 49220

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.125	0.105		ug/L		84	60 - 140

Lab Sample ID: 590-26624-5 MS
Matrix: Water
Analysis Batch: 49226

Client Sample ID: MW-6S
Prep Type: Total/NA
Prep Batch: 49220

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.079		0.125	0.209		ug/L		104	60 - 140

Lab Sample ID: 590-26624-5 MSD
Matrix: Water
Analysis Batch: 49226

Client Sample ID: MW-6S
Prep Type: Total/NA
Prep Batch: 49220

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.079		0.125	0.211		ug/L		106	60 - 140	1	20

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Simplot Warden Groundwater
Sampling/0211550-000

Job ID: 590-26624-1

Client Sample ID: MW-1

Lab Sample ID: 590-26624-1

Date Collected: 08/22/24 12:50

Matrix: Water

Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 17:37	NMI	EET SPK

Client Sample ID: MW-2

Lab Sample ID: 590-26624-2

Date Collected: 08/21/24 15:40

Matrix: Water

Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 17:53	NMI	EET SPK

Client Sample ID: MW-5SR

Lab Sample ID: 590-26624-3

Date Collected: 08/22/24 07:50

Matrix: Water

Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		100	1 mL	1 mL	49226	08/27/24 09:40	NMI	EET SPK

Client Sample ID: MW-5DR

Lab Sample ID: 590-26624-4

Date Collected: 08/21/24 13:50

Matrix: Water

Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 18:26	NMI	EET SPK

Client Sample ID: MW-6S

Lab Sample ID: 590-26624-5

Date Collected: 08/22/24 09:20

Matrix: Water

Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 18:43	NMI	EET SPK

Client Sample ID: MW-600S

Lab Sample ID: 590-26624-6

Date Collected: 08/22/24 09:50

Matrix: Water

Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 19:33	NMI	EET SPK

Lab Chronicle

Client: Haley & Aldrich, Inc.
Job ID: 590-26624-1
Project/Site: Simplot Warden Groundwater
Sampling/0211550-000

Client Sample ID: MW-7S
Lab Sample ID: 590-26624-7
Date Collected: 08/22/24 10:50
Matrix: Water
Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 20:06	NMI	EET SPK

Client Sample ID: MW-7D
Lab Sample ID: 590-26624-8
Date Collected: 08/22/24 11:35
Matrix: Water
Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 20:23	NMI	EET SPK

Client Sample ID: MW-8S
Lab Sample ID: 590-26624-9
Date Collected: 08/21/24 10:15
Matrix: Water
Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 20:39	NMI	EET SPK

Client Sample ID: MW-11S
Lab Sample ID: 590-26624-10
Date Collected: 08/21/24 13:00
Matrix: Water
Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 20:56	NMI	EET SPK

Client Sample ID: MW-12S
Lab Sample ID: 590-26624-11
Date Collected: 08/21/24 11:50
Matrix: Water
Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 21:13	NMI	EET SPK

Client Sample ID: Drum #1
Lab Sample ID: 590-26624-12
Date Collected: 08/22/24 13:50
Matrix: Water
Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 21:29	NMI	EET SPK

Lab Chronicle

Client: Haley & Aldrich, Inc.
Job ID: 590-26624-1
Project/Site: Simplot Warden Groundwater
Sampling/0211550-000

Client Sample ID: Drum #2
Lab Sample ID: 590-26624-13
Date Collected: 08/22/24 13:55
Matrix: Water
Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		10	1 mL	1 mL	49226	08/27/24 09:57	NMI	EET SPK

Client Sample ID: Field Blank
Lab Sample ID: 590-26624-14
Date Collected: 08/22/24 13:00
Matrix: Water
Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 22:03	NMI	EET SPK

Client Sample ID: Equipment Blank
Lab Sample ID: 590-26624-15
Date Collected: 08/22/24 13:05
Matrix: Water
Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:31	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 22:19	NMI	EET SPK

Client Sample ID: Trip Blank
Lab Sample ID: 590-26624-16
Date Collected: 08/19/24 00:00
Matrix: Water
Date Received: 08/23/24 08:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			80 mL	2 mL	49220	08/26/24 13:34	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	49226	08/26/24 22:36	NMI	EET SPK

Laboratory References:

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 590-26624-1
Project/Site: Simplot Warden Groundwater Sampling/0211550-000

Laboratory: Eurofins Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-07-25

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Simplot Warden Groundwater
Sampling/0211550-000

Job ID: 590-26624-1

Method	Method Description	Protocol	Laboratory
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	EET SPK
8011	Microextraction	SW846	EET SPK

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

HALEY ALDRICH

Haley & Aldrich, Inc.
505 W Riverside,
Suite 450,
Spokane WA, 99201

CHAIN OF CUSTODY RECORD

Phone (617) 886-7400
Fax (617) 886-7600
Page 1 of 2

H&A FILE NO. 0211550-000
PROJECT NAME Simplot Warden Groundwater Sampling
H&A CONTACT Kayla Huddleston

LABORATORY Eurofins
ADDRESS
CONTACT

DELIVERY DATE 8/23/24
TURNAROUND TIME STD
PROJECT MANAGER

Sample No.	Date	Time	Depth	Type	EDB EPA 8011	Number of Containers	Comments (special instructions, precautions, additional method numbers, etc.)
MW 1	8/22/24	12 50		H2O	X	2	Laboratory to use applicable DEP CAM methods, unless otherwise directed.
MW 2	8/21/24	15 40			X		
MW 5SR	8/22/24	7:20			X		
MW 5DR	8/21/24	13 50			X		
MW 6S	8/22/24	9 20			X	6	3 MS/MSD
MW 600S	8/22/24	9 50			X	2	
MW 7S	8/22/24	10:50			X		
MW 7D	8/22/24	11 35			X		
MW-8S	8/21/24	10:15			X		
MW 11S	8/21/24	13:00			X		3 3cor 1 Poly

Sampled and Relinquished by	Received by
Sign [signature]	Sign [signature]
Print Chad H	Print Mackey Morris
Firm H&A	Firm EETCSOO
Date 8/23/24 Time 8 A	Date 8/23/24 Time 8:02

Relinquished by	Received by
Sign	Sign
Print	Print
Firm	Firm
Date Time	Date Time

Relinquished by	Received by
Sign	Sign
Print	Print
Firm	Firm
Date Time	Date Time

LIQUID: VOA Vial / Amber Glass / Plastic Bottle / Preservative / Volume

SOLID: VOA Vial / Amber Glass / Clear Glass / Preservative / Volume

Sampling Comments

590-26624 Chain of Custody

Evidence samples were tampered with? YES NO
If YES, please explain in section below.

PRESERVATION KEY

A Sample chilled	C NaOH	E H_2SO_4	G Methanol
B Sample filtered	D HNO_3	F HCL	H Water/NaHSO4 (circle)

Presumptive Certainty Data Package (Laboratory to use applicable DEP CAM methods)

If Presumptive Certainty Data Package is needed, initial all sections

_______ The required minimum field QC samples, as designated in BWSC CAM-VII have been or will be collected, as appropriate, to meet the requirements of Presumptive Certainty.
_______ Matrix Spike (MS) samples for MCP Metals and/or Cyanide are included and identified herein.
_______ This Chain of Custody Record (specify) _______ includes _______ does not include samples defined as Drinking Water Samples.
_______ If this Chain of Custody Record identifies samples defined as Drinking Water Samples, Trip Blanks and Field Duplicates are included and identified and analysis of TICs are required, as appropriate. Laboratory should (specify if applicable) _______ analyze

Required Reporting Limits and Data Quality Objectives

☐ RC-S1 ☐ RC-S2 ☐ RC-GW1 ☐ RC-GW2
☐ S1 ☐ S2 ☐ S3
☐ GW1 ☐ GW2 ☐ GW3

WHITE Laboratory CANARY Project Manager PINK Haley & Aldrich Laboratory

FEBRUARY 2016

Form 3003

HALEY ALDRICH
Haley & Aldrich, Inc.
505 W Riverside,
Suite 450,
Spokane WA, 99201

Phone (617) 886-7400
Fax (617) 886-7600

CHAIN OF CUSTODY RECORD

H&A FILE NO.	0211550 000	LABORATORY	Eurofins	DELIVERY DATE	8/23/24
PROJECT NAME	Sunplot Warden Groundwater Sampling	ADDRESS		TURNAROUND TIME	
H&A CONTACT	Kevin Huddleston	CONTACT		PROJECT MANAGER	

Sample No.	Date	Time	Depth	Type	Analysis Requested: EDB EPA 801												Number of Containers	Comments (special instructions, precautions, additional method numbers, etc.)
MW 12S	8/21/24	1130			X												2	Laboratory to use applicable DEP CAM methods, unless otherwise directed.
Drum #1	8/22/24	1350			X												2	
Drum #2		1355			X												2	
Field Blank		1300			X												2	
Equipment Blank		1305			X												2	
Trip Blank	8/14/24				X												2	
																		3.3corr IR006

Sampled and Relinquished by
Sign [signature]
Print Chad M
Firm H&A
Date 8/23/24 Time 850

Received by
Sign [signature]
Print Macky Morris
Firm EET 800
Date 8/23/24 Time 8:52

Relinquished by
Sign
Print
Firm
Date Time

Received by
Sign
Print
Firm
Date Time

Relinquished by
Sign
Print
Firm
Date Time

Received by
Sign
Print
Firm
Date Time

LIQUID
VOA Vial
Amber Glass
Plastic Bottle
Preservative
Volume

SOLID
VOA Vial
Amber Glass
Clear Glass
Preservative
Volume

Sampling Comments

Evidence samples were tampered with? YES NO
If YES, please explain in section below.

PRESERVATION KEY

A Sample chilled	C NaOH	E H_2SO_4	G Methanol
B Sample filtered	D HNO_3	F HCL	H Water/NaHSO4 (circle)

Presumptive Certainty Data Package (Laboratory to use applicable DEP CAM methods)

If Presumptive Certainty Data Package is needed, initial all sections:

________ The required minimum field QC samples, as designated in BWSC CAM-VII have been or will be collected, as appropriate, to meet the requirements of Presumptive Certainty.
________ Matrix Spike (MS) samples for MCP Metals and/or Cyanide are included and identified herein.
________ This Chain of Custody Record (specify) ________ includes ________ does not include samples defined as Drinking Water Samples.
________ If this Chain of Custody Record identifies samples defined as Drinking Water Samples, Trip Blanks and Field Duplicates are included and identified and analysis of TICs are required, as appropriate. Laboratory should (specify if applicable) ________ analyze

Required Reporting Limits and Data Quality Objectives

☐ RC-S1 ☐ S1 ☐ GW1
☐ RC-S2 ☐ S2 ☐ GW2
☐ RC-GW1 ☐ S3 ☐ GW3
☐ RC-GW2

WHITE Laboratory CANARY Project Manager PINK Haley & Aldrich Laboratory

FEBRUARY 2016

Form 3003

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 590-26624-1

Login Number: 26624

List Source: Eurofins Spokane

List Number: 1

Creator: Morris, Mackenzie 1

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX B
Data Usability Summary Report

Data Usability Summary Report

Project Name: Simplot Warden Groundwater Sampling

Project Description: Groundwater Samples

Sample Date(s): 21 and 22 August 2024

Analytical Laboratory: Eurofins Spokane – Spokane, WA

Validation Performed by: Kristina Ilina

Validation Reviewed by: Vanessa Godard

Validation Date: 16 September 2024

Haley & Aldrich, Inc. prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the analytical results for Sample Delivery Group (SDG) listed. This DUSR is organized into the following sections:

1. **Sample Delivery Group Number 590-26624-1**
2. **Explanations**
3. **Glossary**
4. **Abbreviations**
5. **Qualifiers**

References

This data validation and usability assessment was performed per the guidance and requirements established by the United States Environmental Protection Agency (USEPA) using the following reference materials:

- National Functional Guidelines (NFG) for Organic Data Review.

Data reported in this sampling event were reported to the laboratory reporting limit (RL).

Sample data were qualified in accordance with the laboratory's standard operating procedures (SOPs). The results presented in each laboratory report were found to be compliant with the data quality objectives (DQOs) for the project and are therefore usable; any exceptions are noted in the following pages.

1. Sample Delivery Group Number 590-26624-1

1.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG number 590-26624-1, dated 27 August 2024. Samples were collected, preserved, and shipped following standard chain of custody (COC) protocols. Samples were also received appropriately, identified correctly, and analyzed according to the COC.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Date	Matrix	Methods	Holding Time
MW-1-20240822	N	590-26624-1	08/22/2024	WG	Ethylene Dibromide by Microextraction and Gas by SW8011	14 days preserved, 7 days unpreserved
MW-2-20240821	N	590-26624-2	08/21/2024	WG		
MW-5SR-20240822	N	590-26624-3	08/22/2024	WG		
MW-5DR-20240821	N	590-26624-4	08/21/2024	WG		
MW-6S-20240822	N	590-26624-5	08/22/2024	WG		
MW-600S-20240822	FD	590-26624-6	08/22/2024	WG		
MW-7S-20240822	N	590-26624-7	08/22/2024	WG		
MW-7D-20240822	N	590-26624-8	08/22/2024	WG		
MW-8S-20240821	N	590-26624-9	08/21/2024	WG		
MW-11S-20240821	N	590-26624-10	08/21/2024	WG		
MW-12S-20240821	N	590-26624-11	08/21/2024	WG		
Drum #1-20240822	N	590-26624-12	08/22/2024	DLW		
Drum #2-20240822	N	590-26624-13	08/22/2024	DLW		
Field Blank-20240822	FB	590-26624-14	08/22/2024	WQ		
Equipment Blank-20240822	EB	590-26624-15	08/22/2024	WQ		
Trip Blank-20240819	TB	590-26624-16	08/19/2024	WQ		

1.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

1.3 REPORTING LIMITS AND SAMPLE DILUTIONS

All sample dilutions were reviewed and found to be justified. Only detected analytes were reported from a sample dilution analysis.

1.4 LABORATORY CONTROL SAMPLES

Refer to Section E 1.3. Compounds associated with the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses associated with client samples exhibited recoveries and relative percent differences (RPDs) within the specified limits.

1.5 MATRIX SPIKE SAMPLES

Refer to Section E 1.4. The sample(s) below were used for matrix spike/matrix spike duplicate (MS/MSD):

Lab Sample Number	Matrix Spike/Matrix Spike Duplicate Sample Client ID	Method(s)
590-26624-5	MW-6S	SW8011

1.6 BLANK SAMPLE ANALYSIS

Refer to Section E 1.5. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred. The analysis of the blank samples for field quality control was free of target compounds.

1.7 DUPLICATE SAMPLE ANALYSIS

Refer to Section E 1.6. No client samples were used for laboratory duplicate analysis.

The following sample(s) were used for field duplicate analysis. RPDs were all below 35 percent (or the absolute difference rule was satisfied if detects were less than 5 times the RL).

Primary Sample ID	Duplicate Sample ID	Method(s)
MW-6S-20240822	MW-600S-20240822	SW8011

1.8 PRECISION AND ACCURACY

Refer to Section E 1.7. Where required by the method, some measurement of analytical accuracy and precision was reported for each method with the site samples.

1.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the DQOs for the project and the guidelines specified by the analytical method. Based on the review of this report, the data are useable and acceptable, as no data was rejected. No qualifiers were applied to any data in this report.

2. Explanations

The following explanations include more detailed information regarding each of the sections in the DUSR above. Not all sections in the Explanations are represented:

- E 1.3 Laboratory Control Samples
  - The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses are used to assess the precision and accuracy of the analytical method independent of matrix interferences.
- E 1.4 Matrix Spike Samples
  - Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effects of the sample matrix on the sample preparation procedures and measurement methodologies.
- E 1.5 Blank Sample Analysis
  - Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination.
  - Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport.
- E 1.6 Laboratory and Field Duplicate Sample Analysis
  - The laboratory duplicate sample analysis is used by the laboratory at the time of the analysis to demonstrate acceptable method precision. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
  - The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The relative percent difference (RPD) or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
- E 1.7 Precision and Accuracy
  - Precision measures the reproducibility of repetitive measurements. In a laboratory environment, this will be measured by determining the relative percent difference (RPD) found between a primary and a duplicate sample. This can be an LCS/LCSD pair, a MS/MSD pair, a laboratory duplicate performed on a site sample, or a field duplicate collected and analyzed concurrently with a site sample.
  - Accuracy is a statistical measurement of the correctness of a measured value and includes components of random error (variability caused by imprecision) and systematic error. In a laboratory environment, this will be measured by determining the percent recovery (%R) of certain spiked compounds. This can be assessed using LCS, blank spike (BS), MS, and/or surrogate recoveries.

3. Glossary

Not all of the following symbols, acronyms, or qualifiers occur in this document.

- Sample Types:
  - EB Equipment Blank Sample
  - FB Field Blank Sample
  - FD Field Duplicate Sample
  - N Primary Sample
  - TB Trip Blank Sample
- Units:
  - µg/kg micrograms per kilogram
  - µg/L micrograms per liter
  - µg/m^3 micrograms per cubic meter
  - mg/kg milligrams per kilogram
  - mg/L milligrams per liter
  - ppb v/v parts per billion volume/volume
  - pCi/L picocuries per liter
  - pg/g picograms per gram
  - pg/L picograms per liter
- Matrices:
  - AA Ambient Air
  - GS Soil Gas
  - GW/WG Groundwater
  - QW Water Quality
  - IA Indoor Air
  - SE Sediment
  - SO Soil
  - SSV Sub-slab Vapor
  - WQ Water Quality control matrix
  - WS Surface Water
- Table Footnotes:
  - NA Not applicable
  - ND Non-detect
  - NR Not reported
- Common Symbols:
  - % percent
  - < less than
  - ≤ less than or equal to
  - > greater than
  - ≥ greater than or equal to
  - = equal
  - °C degrees Celsius
  - ± plus or minus
  - ~ approximately
  - x times (multiplier)

- Fractions:
  - N Normal (method cannot be filtered)
  - D Dissolved (filtered)
  - T Total (unfiltered)

4. Abbreviations

%D	Percent Difference
%R	Percent Recovery
%RSD	Percent Relative Standard Deviation
%v/v	Percent volume by volume
2s	2 sigma
4,4-DDT	4 4-dichlorodiphenyltrichloroethane
Abs Diff	Absolute Difference
amu	atomic mass unit
BPJ	Best Professional Judgement
BS	Blank Spike
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CCVL	Continuing Calibration Verification Low
COC	Chain of Custody
COM	Combined Isotope Calculation
Cr (VI)	Hexavalent Chromium
CRI	Collision Reaction Interface
DoD	Department of Defense
DQO	data quality objective
DUSR	Data Usability Summary Report
EIS	Extraction Internal Standard
EMPC	Estimated Maximum Possible Concentration
FBK	Field Blank Contamination
FDP	Field Duplicate
GC	Gas Chromatograph
GC/MS	Gas Chromatography/Mass Spectrometry
GPC	Gel Permeation Chromatography
H_2	Hydrogen gas
HCl	Hydrochloric Acid
ICAL	Initial Calibration
ICB	Initial Calibration Blank
ICP/MS	Inductively Coupled Plasma/Mass Spectrometry
ICV	Initial Calibration Verification
ICVL	Initial Calibration Verification Low
IPA	Isopropyl Alcohol
LC	Laboratory Control
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
MBK	Method Blank Contamination
MDC	Minimum Detectable Concentration
MDL	Laboratory Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	not applicable
ND	Non-Detect
NFG	National Functional Guidelines
NH_3	Ammonia
NYSDEC	New York State Department of Environmental Conservation
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PDS	Post-Digestion Spike
PEM	Performance Evaluation Mixture
PFAS	Per- and Polyfluoroalkyl Substances
PFBA	Perfluorbutanoic Acid
PFD	Perfluorodecalin
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane sulfonate
PFPeA	Perfluoropentanoic Acid
QAPP	Quality Assurance Project Plan
QC	Quality Control
QSM	Quality Systems Manual
R^2	R-squared value
Ra-226	Radium-226
Ra-228	Radium-228
RESC	Resolution Check Measure
RL	Laboratory Reporting Limit
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SAP	Sampling Analysis Plan
SDG	Sample Delivery Group
SIM	Selected ion monitoring
SOP	Standard Operating Procedure
SPE	Solid-Phase Extraction
SVOC	Semi-Volatile Organic Compound
TCLP	Toxicity Characteristic Leaching Procedure
TIC	Tentatively Identified Compound
TKN	Total Kjeldahl Nitrogen
TPH	Total Petroleum Hydrocarbon
TPU	Total Propagated Uncertainty
USEPA	U.S. Environmental Protection Agency
VOC	Volatile Organic Compound
WP	Work Plan

5. Qualifiers

The qualifiers below are from the USEPA National Functional Guidelines and the data in the DUSR may contain these qualifiers:

- Concentration (C) Qualifiers:

  U The compound was analyzed for but not detected. The associated value is either the compound quantitation limit if not detected by the analytical instrument or could be the reported or blank concentration if qualified by blank contamination. This can also be displayed as less than the associated compound quantitation limit (<RL or <MDL), or "ND".

  B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers:

  E The compound was quantitated above the calibration range.

  D The concentration is based on a diluted sample analysis.

- Validation Qualifiers:

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  J+ The result is an estimated quantity, but the result may be biased high.

  J- The result is an estimated quantity, but the result may be biased low.

  J/UJ as listed in exception tables J applies to detected data and UJ applies to non-detected data as reported by the laboratory.

  UJ The compound was not detected. The reported sample quantitation limit is approximate.

  NJ The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is an estimated concentration only.

  R The sample results were rejected as unusable; the compound may or may not be present in the sample.

  S Result is suspect. See DUSR for details.

References

1. United States Environmental Protection Agency, 2020b. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-20-005. November.