

**REPORT ON**  
**HEGLAR KRONQUIST LANDFILL**  
**QUARTERLY COMPLIANCE MONITORING - JANUARY 2025**  
**MEAD, WASHINGTON**

by  
Haley & Aldrich, Inc.  
Spokane, Washington

Prepared for  
Kaiser Aluminum Investments Company  
Spokane Valley, Washington

for  
Washington State Department of Ecology  
Spokane, Washington

File No. 0202596-005  
June 2025





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June 20, 2025  
File No. 0202596-005

Washington State Department of Ecology  
Eastern Region Office  
4601 North Monroe Street  
Spokane, Washington 99205

Attention: Kailey Schrum, Toxics Cleanup Program - Site Manager

Subject: Heglar Kronquist Landfill Quarterly Compliance Monitoring – January 2025  
Cleanup Site ID No. 1135, Facility Site ID No. 645  
Mead, Washington

Dear Kailey Schrum:

This Report summarizes the results of the January 2025 quarterly compliance monitoring event conducted at the Heglar Kronquist Landfill (Site) near Mead, Washington. The Site location is shown on “Vicinity Map,” Figure 1. The purpose of compliance monitoring is to evaluate the effectiveness of the cleanup action implemented at the Site in 2014 (Final Cleanup Action Plan [FCAP]; Washington State Department of Ecology [Ecology], 2012). Haley & Aldrich conducts monitoring on behalf of Kaiser Aluminum Investments Company (KAIC; formally known as DCO Management, LLC [DCO]), a subsidiary of the Kaiser Aluminum Corporation, and pursuant to the Final Consent Decree between DCO and Ecology dated June 6, 2013 (Ecology, 2013).

Please do not hesitate to contact us if you have any questions or concerns regarding this project.

Sincerely yours,  
**HALEY & ALDRICH, INC.**

A blue ink signature of Cameron Luckey, consisting of a stylized 'C' and 'L'.

Cameron Luckey  
Staff Environmental Scientist

A blue ink signature of John Haney, featuring a cursive 'J' and 'H'.

John Haney, P.E.  
Senior Client Account Manager

Enclosures

[https://haleyaldrich.sharepoint.com/sites/KaiserAluminumFabricatedProducts/Shared Documents/0202596.Heglar Kronquist/002-HK Compliance Monitoring/Deliverables/January 2025 Report/Draft\\_1/2025\\_0620\\_HAI\\_KAIC\\_Jan2025HeglarKronquistComplianceRpt\\_F.docx](https://haleyaldrich.sharepoint.com/sites/KaiserAluminumFabricatedProducts/Shared Documents/0202596.Heglar Kronquist/002-HK Compliance Monitoring/Deliverables/January 2025 Report/Draft_1/2025_0620_HAI_KAIC_Jan2025HeglarKronquistComplianceRpt_F.docx)

**SIGNATURE PAGE FOR**  
**REPORT ON**  
**HEGLAR KRONQUIST LANDFILL**  
**QUARTERLY COMPLIANCE MONITORING – JANUARY 2025**  
**MEAD, WASHINGTON**

**PREPARED FOR**  
**KAISER ALUMINUM INVESTMENTS COMPANY**  
**SPOKANE VALLEY, WASHINGTON**

PREPARED BY:



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Cameron Luckey  
Staff Environmental Scientist  
Haley & Aldrich, Inc.

REVIEWED AND APPROVED BY:



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John Haney, P.E.  
Senior Client Account Manager  
Haley & Aldrich, Inc.

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## 1. Compliance Monitoring

Kaiser Aluminum Investments Company (KAIC) began implementing the approved Compliance Monitoring Plan (CMP; Hart Crowser, Inc. [Hart Crowser; now Haley & Aldrich, Inc.], 2013a) in 2015 following reconstruction of the Heglar Kronquist Landfill (Site) cap. KAIC completed cap reconstruction to reduce infiltration of surface water through the landfilled materials and improve groundwater quality. KAIC conducts compliance monitoring to assess the effectiveness of cap improvements on groundwater quality. Current compliance monitoring includes:

- Inspecting the condition of Site features, including the cap, perimeter drainage swales, landfill gas vents (GV-1 through GV-17), signage, monitoring wells, and perimeter fencing;
- Gauging groundwater elevations and collecting groundwater samples from six monitoring wells (MW-1 and MW-3 through MW-6/7 ; see “January 2025 - Site Plan,” Figure 2, for well locations);
- Measuring and recording concentrations of ammonia gas in landfill gas vents;
- Collecting surface water samples at five locations (SW-1 through SW-3, SW-5, and SW-Upgradient);
- Measuring temperature, pH, conductivity, oxidative reduction potential (ORP), turbidity, and dissolved oxygen (DO; water quality parameters) from groundwater and surface water;
- Submitting groundwater and surface water samples to a Washington-accredited chemical analytical laboratory for chloride, nitrate plus nitrite as nitrogen (nitrate/nitrite), total and dissolved sodium, and total dissolved solids (TDS), herein referred to as contaminants of concern (COC); and
- Summarizing the findings from each event in a Compliance Monitoring Report.

At the end of the five-year monitoring period required by Consent Decree No. 13202067 (Consent Decree), the Washington State Department of Ecology (Ecology) reviewed the compliance monitoring data and concluded that, although COC concentrations had declined since installation of the enhanced cap, cleanup standards for chloride and nitrate/nitrite at select locations were not in compliance and annual monitoring should continue for an additional five years. Ecology requested KAIC conduct annual monitoring events during the spring when groundwater elevations are at seasonal highs.

After reviewing the April 2023 Annual Compliance Monitoring Report, Ecology expressed concerns over remaining elevated concentrations of chloride and nitrate/nitrite in groundwater and surface water hydraulically downgradient of the Site. Ecology requested KAIC resume quarterly groundwater monitoring. Monitoring activities conducted during the January 2025 compliance monitoring event are detailed in the Sections below.

## **2. First Quarter 2025 Compliance Monitoring Field Activities**

Haley & Aldrich, Inc. (Haley & Aldrich) conducted compliance monitoring activities on January 16 and February 7, 2025. We measured depths to groundwater and collected groundwater samples from monitoring wells MW-1, -3, and -4 using low-flow/low-stress techniques. Additionally, we collected surface water samples from one seep and the unnamed stream west of the Site (SW-3 and SW-5, respectively). Monitoring well and surface water sample locations are shown on “January 2025 – Site Plan,” Figure 2, and “Chloride - Nitrate/Nitrite Concentrations January 2025,” Figure 3. Field activities were conducted in general accordance with the Final Sampling and Analysis Plan and Quality Assurance Project Plan, which was revised in 2024 (Hart Crowser, 2013b).

We also collected groundwater samples from nearby domestic wells located at 13111 East Kronquist Road and 13320 North Darknell Road (DW-1 and DW-2, respectively), as well as one background surface water sample (SW-Upgradient) from an unnamed stream located northeast of DW-2. These additional sample locations are shown on “Background Chloride - Nitrate/Nitrite Concentrations January 2025,” Figure 4.

### **2.1 CONDITION OF SITE FEATURES**

Haley & Aldrich inspected the condition of monitoring wells, condition of the landfill cap, landfill gas vents, security fencing, and signage on January 16, 2025. Results of our surface feature inspection are discussed below.

#### **2.1.1 Security Controls**

Haley & Aldrich inspected the perimeter fence, gates, locks, and signage. Security control features were intact and posted signage was present and visible along the perimeter fence.

#### **2.1.2 Engineered Cap**

Haley & Aldrich observed that the overall condition of the cap is good, it is functioning as designed, and requires no repairs with the exception of the animal burrow previously reported. Wire mesh previously installed to deter entry to the burrow has not been effective; however, the damage to the cap appears to be limited to the soil cover only. Haley & Aldrich and KAIC are assessing additional remedial actions regarding the animal burrow.

#### **2.1.3 Landfill Gas Vents**

Haley & Aldrich inspected the overall integrity of the landfill gas vents. The vents appeared in good condition and are operating as designed.

#### **2.1.4 Monitoring Wells**

Haley & Aldrich inspected the overall integrity and security of the monitoring wells, including monuments, surface seals, and protective bollards and rails. Excluding MW-2, monitoring well features are in good condition and do not require maintenance or repairs at this time; MW-2 requires well rehabilitation or decommissioning (see the April 2024 Compliance Monitoring Report for further details).

## 2.2 GROUNDWATER ELEVATIONS

Haley & Aldrich measured depth to groundwater in monitoring wells MW-1, -3, -4, -5 and -7. Depth to groundwater measurements were referenced to the top of casing (TOC) in each well, which are then referenced to the North American Vertical Datum of 1988 (NAVD 88). During the monitoring event, depth to groundwater ranged between 34.07 and 58.43 feet below TOC in MW-5 and MW-1, respectively (see “Groundwater and Surface Water Elevations and Field Parameters,” Table 1).

This range in measurements generally correlates with seasonal variations in groundwater elevations observed during previous monitoring events. Haley & Aldrich used depth to groundwater to calculate corresponding groundwater elevations in monitoring wells MW-1, -3, -4, -5, and -7 by subtracting the depth to water in each well from the corresponding TOC elevation. Calculated groundwater elevations ranged between 2,116.70 and 2195.04 feet (NAVD 88) in MW-7 and MW-4, respectively. Groundwater elevations calculated for each monitoring well are summarized in Table 1 and shown on Figure 2.

### 2.2.1 Pressure Transducer Elevation Data

Haley & Aldrich retrieved and downloaded data from In-Situ Rugged Troll 100 pressure transducers (transducers) deployed in monitoring wells MW-1, -3, -4, -5, and -7 and the In-Situ barometric pressure logger (BaroTROLL) deployed at the top of the MW-1 well monument. We used recorded barometric pressure data to correct transducer data for atmospheric pressure changes during the deployment period (October 31, 2024 and January 16, 2025) to calculate corresponding groundwater elevations.

We uploaded atmospheric and transducer pressure data into In-Situ’s software (VuSitu) to generate groundwater elevations; the software outputs are shown on “Monitoring Wells 1, 3, and 7 Hydrograph,” Figure 5, and “Monitoring Wells 4 and 5 Hydrograph,” Figure 6. Calculated groundwater elevations indicate elevations generally increased during the monitoring period (see Figure 6). Figure 5 indicates that groundwater elevations in MW-1 ranged between approximately 2,122.91 and 2,125.06 feet, MW-3 ranged between approximately 2,119.61 and 2,120.89 feet, and MW-7 ranged between approximately 2,115.56 and 2,116.71 feet relative to NAVD 88. The elevation data indicates the highest groundwater elevations in these wells were observed during January 2025 and the lowest groundwater elevations were observed during October 2024. The highest groundwater elevation at MW-4 was recorded at 2,195.33 feet (NAVD 88), approximately 9.8 feet below the assumed bottom dross elevation (2,205.1 feet [NAVD 88])

## 2.3 GROUNDWATER SAMPLING

On January 16, 2025, Haley & Aldrich sampled groundwater from monitoring wells MW-1, -3, and -4 using a submersible pump, dedicated sample tubing, and low-flow/low-stress sampling techniques. Haley & Aldrich measured and recorded water quality parameters during the purging process using a YSI ProDSS Water Quality Meter (YSI) equipped with a flow-through cell. Haley & Aldrich collected groundwater samples after water quality parameter values stabilized (water quality parameters are considered stabilized when fluctuations are less than 10 percent between three readings taken one minute apart). Water quality measurements recorded at stabilization are summarized in Table 1.

Haley & Aldrich collected groundwater samples by pumping the samples directly into containers provided by the laboratory. Haley & Aldrich field-filtered groundwater samples collected for dissolved sodium using a 0.45-micron in-line filter. Following sample collection, we placed the samples in a cooler with ice until submitted to the laboratory for chemical analyses under chain-of-custody procedures.

## 2.4 SURFACE WATER SAMPLING

Surface water sample locations SW-3 and SW-5 were running freely during the sampling event; therefore, no pumping was required to collect samples. Haley & Aldrich measured and recorded surface water quality parameters from each sampling location prior to collecting samples; water quality measurements are summarized in Table 1. Haley & Aldrich collected surface water samples by placing a laboratory-supplied sample container directly into the flow of each source and then placing the samples in a cooler with ice until delivery to the laboratory for chemical analyses under chain-of-custody procedures.

## 2.5 BACKGROUND WATER SAMPLING

On January 16 and February 7, 2025, Haley & Aldrich collected samples DW-1 and DW-2, respectively, from exterior hose bibbs at two residences east of the Site. Prior to collecting samples, we purged the plumbing system until water quality parameters stabilized utilizing the same method as groundwater sampling described above. Water quality measurements recorded at stabilization are shown in Table 1. We collected water samples by allowing the water from each hose bib to freely flow directly into containers provided by the laboratory. Dissolved sodium samples collected at DW-1 and DW-2 were field-filtered using a 0.45-micron in-line filter.

Haley & Aldrich also collected a surface water sample from the SW-Upgradient sample location shown on Figure 4 using the technique previously described. Haley & Aldrich then collected a surface water sample by placing a laboratory-supplied sample container directly into the flow of the unnamed stream. Haley & Aldrich placed the background water samples into a cooler with ice until submitted to the laboratory for chemical analyses under chain-of-custody procedures.

## 2.6 LANDFILL GAS VENT MONITORING

Prior to collecting ammonia readings in the landfill gas vents, Haley & Aldrich installed sampling ports on each vent riser pipe (GV-1 through GV-17; see "Landfill Gas Vent Plan," Figure 7). We installed the sampling ports by drilling and tapping the vent riser pipes at approximately 3.5 feet above ground surface. After drilling, Haley & Aldrich tapped each hole to receive a 0.5-inch threaded ball valve. Haley & Aldrich installed the sampling ports on the south side of each gas vent and then labeled each gas vent with a stamped aluminum tag.

Haley & Aldrich measured ammonia concentrations in gas vents GV-1 through GV-17 on February 7, 2025 using a MultiRAE Series PGM 6228 monitor (MultiRAE) and recorded the measurements in a field notebook. The MultiRAE was calibrated to measure ammonia concentrations between zero and 99 parts per million (ppm) by Pine Environmental Services, LLC prior to shipping. We measured ammonia concentrations by placing the MultiRAE intake directly into the sampling port and recording measurements every six seconds for one minute (10 readings total). Measurements indicate that ammonia was not detected in gas vents GV-1 through GV-8, GV-11, GV-13, or GV-15. Ammonia concentrations in the remaining gas vents ranged between 1 and 97 and 1 ppm, respectively (see Figure 7). Detected ammonia concentrations from gas vents are summarized in "Gas Vent Average Ammonia Concentrations," Table 2.

### 3. Chemical Analytical Results

Haley & Aldrich submitted groundwater and surface water samples to Eurofins Environment Testing Northwest, LLC (Eurofins) in Spokane Valley, Washington for chemical analyses. Groundwater and surface water analytical results are summarized in Tables 3 and 4, respectively. The analytical results also are shown in Figures 3 and 4; the laboratory report and our data quality review is provided in “Data Usability Summary Report and Analytical Laboratory Report,” Appendix A.

Haley & Aldrich compared groundwater analytical results to the cleanup standards for chloride and nitrates established in the Final Cleanup Action Plan (FCAP), which are as follows:

- 250 milligrams per liter (mg/L) for chloride based on the federal and state drinking water secondary maximum contaminant level; and
- 14 mg/L for nitrate based on background concentrations in nearby wells.

Haley & Aldrich compared surface water analytical results to the cleanup standards for chloride and nitrates established to protect aquatic life, which are 230 mg/L for chloride and 10 mg/L for nitrates.

#### 3.1 GROUNDWATER ANALYTICAL RESULTS

Eurofins analyzed groundwater samples for the following COCs using the methods indicated:

- chloride (U.S. Environmental Protection Agency [EPA] Method 300.0);
- nitrate/nitrite as nitrogen (EPA Method 353.2);
- dissolved sodium (EPA Method 6010D); and
- TDS (Standard Method [SM] 2540C).

Chloride was detected in each of wells sampled during the January 2025 monitoring event. Chloride concentrations in monitoring wells ranged between 28 mg/L in MW-4 and 520 mg/L in MW-3 (see “Groundwater Chemical Analytical Results,” Table 3). Chloride concentrations exceeded the cleanup standard in MW-3, but have decreased since the January 2024 monitoring event. Chloride was detected in both background groundwater sample locations: 22 mg/L in DW-1 and 26 mg/L in DW-2. Chloride concentrations over time for monitoring wells sampled are shown in “Groundwater Chloride Concentrations Versus Time,” Figure 8, and “Background Groundwater Chloride Concentrations Versus Time,” Figure 9.

Nitrate/nitrite was detected in each of the wells sampled during the January 2025 monitoring event. Nitrate/nitrite concentrations ranged between 18 mg/L in MW-3 and 27 mg/L in MW-4. Nitrate/nitrite was detected in background groundwater samples at concentrations of 17 mg/L in DW-1 and 18 mg/L in DW-2. Nitrate/nitrite concentrations exceeded the cleanup standard in each of the groundwater samples. Nitrate/nitrite concentrations over time for each groundwater location are shown on “Groundwater Nitrate/Nitrite Concentrations Versus Time,” Figure 10, and “Background Nitrate/Nitrite Concentrations Versus Time,” Figure 11.

Dissolved sodium and TDS were detected at concentrations greater than the method reporting limits in each of the groundwater samples analyzed, but are not used to determine compliance with cleanup standards. Analytical results indicate concentrations of nitrates in groundwater samples collected from

monitoring wells MW-1, -3, and -4 during the January 2025 monitoring event increased compared to the January 2024 monitoring event. Chlorides remained relatively the same in wells monitored in both January 2024 and January 2025, with the exception of MW-3 where chlorides concentrations decreased (see Table 3).

### 3.2 SURFACE WATER ANALYTICAL RESULTS

Eurofins analyzed surface water samples collected from SW-3, -5, and -Upgradient for the same COCs and using the same analytical methods as described in Section 3.1 above. However, surface water samples were analyzed for total sodium (EPA Method 6010C), instead of dissolved sodium (EPA Method 6010D).

Chloride was detected in each surface water monitoring location. Concentrations ranged between 6.4 and 270 mg/L at SW-Upgradient and SW-3/SW-5. Analytical results indicate that SW-3 and SW-5 samples exceeded the 230 mg/L cleanup standard. Chloride concentrations in SW-3 and SW-5 are similar to concentrations observed during the January 2024 monitoring event.

Nitrate/nitrite was detected in each surface water monitoring sample. Concentrations ranged between 7 and 18 mg/L at SW-5 and SW-Upgradient, respectively. Analytical results indicate that surface water samples exceeded the 10 mg/L cleanup standard at SW-3 and SW-Upgradient, and nitrate/nitrite concentrations have increased in SW-5 and SW-3 since the January 2024 monitoring event.

Concentration trend plots for chloride and nitrate/nitrite in surface water locations are shown on “Surface Water Chloride Concentrations Versus Time,” Figure 12, and “Surface Water Nitrate/Nitrite Concentrations Versus Time” Figure 13. Figures 12 and 13 also show groundwater elevations in MW-3 over time.

Dissolved sodium and TDS were detected at concentrations greater than the method reporting limits in each of the three surface water sample locations (see “Surface Water Chemical Analytical Results,” Table 4). Analytical results indicate that concentrations in each of the surface water samples are similar to those observed during recent sampling events.

## 4. Findings

Data indicates groundwater elevations in MW-1, -3, and -7 fluctuate less during the monitoring period compared to the more variable elevations observed in monitoring wells MW-4 and -5 (See Figures 5 and 6). Groundwater data recorded by the transducers also indicate that the highest groundwater elevation during the deployment period occurred in monitoring well MW-4 (approximately 2,195.3 feet NAVD88). Based on the current estimated bottom of dross elevations (approximately 2,205 feet NAVD88), it appears that groundwater elevations did not contact the landfilled dross.

Chemical analytical data indicate that chloride concentrations in monitoring well MW-3 exceeded the cleanup standard of 250 mg/L; chloride concentrations in the remaining wells did not exceed the cleanup standard. Historically, chloride concentrations in MW-3 widely fluctuate and do not appear to correlate with groundwater elevations (see Figure 8). Analytical data from the background well locations DW-1 and -2 indicate that chloride concentrations in these wells do not exceed the cleanup standard (see Figure 9).

Chemical analytical data indicate that nitrate/nitrite concentrations in monitoring wells MW-1, -3, and -4 remain greater than the cleanup standard (Figure 10). Additionally, nitrate/nitrite concentrations in background wells DW-1 and -2 exceed the cleanup standard (see Figure 11).

Analytical results indicate that chloride concentrations in SW-3 and SW-5 are greater than the cleanup standard (see Figure 12). Chloride concentrations at background location SW-Upgradient did not exceed the cleanup standard.

Chemical analytical data indicate that nitrate/nitrite concentrations increased in surface water sample locations SW-3 and SW-5 when compared to the January 2024 monitoring event (see Figure 13). Both the SW-3 and SW-Upgradient samples contained concentrations that exceed the surface water standard.

In order to better understand the distribution of ammonia gas, KAIC increased ammonia gas vent monitoring to include available landfill gas vents (GV-1 to GV-17). Haley & Aldrich installed sample ports in each of the vent riser pipes during the January 2025 monitoring event and ammonia gas was detected in six of the vents (see Figure 7). The presence of ammonia gas could indicate the landfilled dross is in contact with water; however, because the cap appears to be functioning as designed and maximum groundwater elevations are lower than assumed bottom of dross elevations, a pathway for dross to contact water is not known.

## References

1. Haley & Aldrich, Inc. (Haley & Aldrich), 2023. "Heglar-Kronquist Landfill Mead Washington Assessment Plan," December.
2. Haley & Aldrich, Inc. (Haley & Aldrich), 2024. "Revised Draft Heglar Kronquist Landfill Assessment Plan," August 23.
3. Hart Crowser, Inc. (Hart Crowser), 2013a. "Final Compliance Monitoring Plan, Heglar Kronquist Site," August 12.
4. Hart Crowser, Inc. (Hart Crowser), 2013b. "Final Sampling and Analysis Plan and Quality Assurance Project Plan," August 12.
5. Hart Crowser, Inc. (Hart Crowser), 2015. "Cleanup Action Construction Completion Report, Heglar Kronquist Landfill," August 4.
6. Washington State Department of Ecology (Ecology), 2012. "Final Cleanup Action Plan, Heglar Kronquist Site, CSID 1135, FSID 645," October.
7. Washington State Department of Ecology (Ecology), 2013. "Consent Decree No. 13202067-4," June 6.

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## **TABLES**

**TABLE 1**  
**GROUNDWATER AND SURFACE WATER ELEVATIONS AND FIELD PARAMETERS**  
 HEGLAR KRONQUIST LANDFILL COMPLIANCE MONITORING  
 MEAD, WASHINGTON  
 FILE NO. 0202596-005

Sample Location	Date of Measurement	Top of Casing Elevation in feet (NAVD88)	Depth to Water (feet) <sup>1</sup>	Groundwater & Surface Water Elevation in feet above msl	Temperature	pH	Conductivity	ORP	Turbidity	DO
					[°C]		[μS/cm]	[mV]	[NTU]	[mg/L]
MW-1	<i>Monitoring Wells</i>									
	30-Sep-10	2,183.49	--	--	--	--	847	--	--	--
	24-Jan-11	--	58.76	2,124.73	--	--	--	--	5.17	--
	25-Apr-11	--	54.80	2,128.69	10.74	6.93	2,010	--	5.09	--
	28-Oct-15	--	60.96	2,122.53	12.13	6.97	570	187	342	8.71
	26-Jan-16	--	60.35	2,123.14	8.76	6.99	565	113	35.0	8.76
	22-Apr-16	--	58.04	2,125.45	11.56	7.05	428	103	60.1	9.00
	26-Jul-16	--	58.40	2,125.09	11.72	7.42	616	47	1.40	8.98
	21-Oct-16	--	59.70	2,123.79	11.52	7.88	1,197	96	34.6	8.89
	24-Jan-17	--	59.38	2,124.11	10.57	6.94	567	257	3.70	8.59
	24-Apr-17	--	44.86	2,138.63	12.52	6.86	2,397	151	2.20	9.24
	20-Jul-17	--	47.05	2,136.44	13.14	6.58	1,965	243	3.40	9.05
	10-Jan-18	--	52.80	2,130.69	10.20	6.94	837	224	0.94	9.36
	19-Apr-18	--	46.42	2,137.07	12.33	6.95	1,024	175	23.1	9.09
	12-Oct-18	--	52.84	2,130.65	11.70	7.14	864	218	0.72	8.79
	12-Apr-19	--	53.69	2,129.80	11.19	7.06	802	85	0.00	8.40
	23-Oct-19	--	56.51	2,126.98	11.42	6.84	780	216	3.37	8.79
	4-May-20	--	56.42	2,127.07	11.30	6.85	1,120	205	0.83	8.78
	15-Oct-20	--	57.35	2,126.14	11.26	6.93	801	164	0.00	9.28
	21-Apr-21	--	57.65	2,125.84	12.60	7.15	654	88	1.09	8.73
	21-Apr-22	--	59.27	2,124.22	10.80	6.91	561	79	2.51	8.90
	26-Apr-23	--	59.56	2,123.93	11.90	7.06	777	135	3.38	8.73
	31-Jan-24	--	60.83	2,122.66	10.90	6.91	778	185	19.98	8.87
24-Apr-24	--	58.91	2,124.58	11.10	7.00	535	163	4.78	8.86	
18-Jul-24	--	58.99	2,124.50	14.40	6.97	812	251	24.23	8.94	
31-Oct-24	--	60.44	2,123.05	10.80	7.72	678	161	0.63	9.00	
16-Jan-25	--	58.43	2,125.06	9.7	7.08	807	114.9	2.52	9.6	
MW-2	30-Sep-10	2,186.19	--	--	--	--	1,129	--	--	--
	24-Jan-11	--	65.80	2,120.39	7.60	7.03	590	--	41.6	--
	25-Apr-11	--	61.52	2,124.67	10.59	7.15	906	--	3.45	--
	28-Oct-15	--	67.04	2,119.15	11.08	7.07	749	197	24.7	8.25
	26-Jan-16	--	67.27	2,118.92	10.94	7.07	675	104	0.100	7.42
	22-Apr-16	--	64.52	2,121.67	11.15	7.27	1,649	125	20.1	8.44
	26-Jul-16	--	64.86	2,121.33	12.03	7.40	666	40	12.3	7.81
	24-Oct-16	--	66.21	2,119.98	11.39	7.23	714	117	1.60	8.22
	24-Jan-17	--	65.95	2,120.24	10.61	7.11	1,131	178	7.00	8.11
	24-Apr-17	--	56.46	2,129.73	11.89	7.01	1,536	151	62.2	8.58
	20-Jul-17	--	57.99	2,128.20	12.20	6.63	2,209	142	7.40	8.33
	10-Jan-18	--	60.52	2,125.67	--	--	--	--	--	--
	19-Apr-18	2186.38	56.50	2,129.88	12.07	7.04	1,012	178	38.4	8.95
	12-Oct-18	--	60.43	2,125.95	11.97	7.10	1,092	197	629	8.39
	12-Apr-19	--	60.89	2,125.49	11.45	7.12	885	78	6.31	8.33
	23-Oct-19	--	62.64	2,123.74	10.88	7.15	990	212	2.65	8.33
	4-May-20	--	62.60	2,123.78	11.09	6.97	1,190	110	1.66	8.71
	15-Oct-20	--	63.55	2,122.83	10.89	7.00	953	155	0	8.81
21-Apr-21	--	63.83	2,122.55	10.80	7.13	684	76	1.98	7.53	
21-Apr-22	--	65.57	2,120.81	10.70	6.96	634	161	3.67	8.11	
26-Apr-23	--	65.94	2,120.44	11.10	7.12	884	135	2.26	7.95	
31-Jan-24	<b>No longer sampled: blockage observed at approximately 65.5 feet below top of casing.</b>									

**TABLE 1**  
**GROUNDWATER AND SURFACE WATER ELEVATIONS AND FIELD PARAMETERS**  
 HEGLAR KRONQUIST LANDFILL COMPLIANCE MONITORING  
 MEAD, WASHINGTON  
 FILE NO. 0202596-005

Sample Location	Date of Measurement	Top of Casing Elevation in feet (NAVD88)	Depth to Water (feet) <sup>1</sup>	Groundwater & Surface Water Elevation in feet above msl	Temperature	pH	Conductivity [μS/cm]	ORP [mV]	Turbidity [NTU]	DO [mg/L]
					[°C]					
MW-3	1-Oct-10	2,176.18	--	--	--	--	2,965	--	--	--
	25-Jan-11	--	55.21	2,120.97	--	--	--	--	4.30	--
	26-Apr-11	--	51.03	2,125.15	10.25	7.78	2,787	--	4.81	--
	28-Oct-15	--	56.69	2,119.49	11.47	6.91	2,067	187	33.5	7.62
	26-Jan-16	--	56.84	2,119.34	10.98	6.62	2,051	132	12.6	7.54
	22-Apr-16	--	54.07	2,122.11	11.88	7.11	5,492	135	18.4	8.18
	26-Jul-16	--	54.35	2,121.83	11.66	6.93	2,030	54	10.3	7.83
	21-Oct-16	--	55.77	2,120.41	12.04	8.27	2,660	91	41.3	7.73
	24-Jan-17	--	55.54	2,120.64	10.74	6.74	1,963	199	7.20	7.67
	24-Apr-17	--	45.01	2,131.17	11.94	6.75	3,321	159	6.00	9.33
	20-Jul-17	--	46.49	2,129.69	12.98	6.67	3,305	254	7.80	7.77
	10-Jan-18	--	49.70	2,126.48	10.45	6.87	2,325	230	17.9	8.26
	19-Apr-18	--	45.19	2,130.99	11.93	6.60	2,305	210	12.2	7.99
	12-Oct-18	--	49.55	2,126.63	11.70	6.86	2,113	222	15.0	7.54
	12-Apr-19	--	50.14	2,126.04	11.28	6.66	2,103	117	3.50	7.48
	23-Oct-19	--	52.05	2,124.13	11.55	6.91	2,140	211	185	7.57
	4-May-20	--	52.03	2,124.15	11.35	6.80	2,650	250	3.50	7.80
	15-Oct-20	--	52.98	2,123.20	11.43	6.75	2,129	173	0.00	7.96
	21-Apr-21	--	53.29	2,122.89	11.40	7.14	1,612	93	2.32	7.79
	21-Apr-22	--	55.08	2,121.10	11.00	6.67	1,617	195	2.21	7.97
	26-Apr-23	--	55.45	2,120.73	12.30	6.84	2,162	146	6.80	7.77
31-Jan-24	--	56.90	2,119.28	10.40	6.65	2,397	182	5.85	7.59	
24-Apr-24	--	54.90	2,121.28	11.50	6.80	1,457	135	9.58	7.96	
18-Jul-24	--	54.95	2,121.23	15.80	6.77	2,061	305	12.78	7.76	
31-Oct-24	--	56.45	2,119.73	11.00	7.04	1,894	169	0.05	7.80	
16-Jan-25	--	55.29	2,120.89	9.4	6.84	1,922	118.1	2.27	8.39	
MW-4	30-Sep-10	2,247.25	--	--	--	--	1,411	--	--	--
	24-Jan-11	--	51.98	2,195.27	--	--	--	--	13.3	--
	26-Apr-11	--	51.13	2,196.12	10.48	7.33	3,914	--	2.74	--
	28-Oct-15	--	53.90	2,193.35	11.45	6.92	830	167	3.20	0.13
	26-Jan-16	--	52.56	2,194.69	11.14	6.81	810	122	13.4	0.06
	22-Apr-16	--	52.39	2,194.86	11.47	6.85	1,491	145	15.4	0.25
	26-Jul-16	--	52.60	2,194.65	11.73	7.06	1,172	45	5.10	0.02
	21-Oct-16	--	52.99	2,194.26	11.30	7.52	1,514	96	5.40	0.11
	24-Jan-17	--	52.58	2,194.67	10.80	6.83	1,128	203	7.50	0.13
	24-Apr-17	--	47.99	2,199.26	11.83	6.72	1,759	153	14.7	0.66
	20-Jul-17	--	50.00	2,197.25	12.25	6.73	2,248	182	2.70	0.64
	10-Jan-18	--	50.59	2,196.66	10.55	6.90	991	220	1.40	0.59
	19-Apr-18	--	48.62	2,198.63	10.11	6.94	763	248	8.70	9.47
	12-Oct-18	--	51.48	2,195.77	11.45	6.83	940	215	8.70	0.29
	12-Apr-19	--	51.17	2,196.08	11.53	6.91	809	67	0.00	0.20
	23-Oct-19	--	52.39	2,194.86	11.16	6.84	820	230	11.2	0.50
	4-May-20	--	52.14	2,195.11	11.30	6.64	1,000	210.7	0.26	0.10
	15-Oct-20	--	52.54	2,194.71	11.17	6.83	810	169.1	0.00	0.15
	21-Apr-21	--	52.41	2,194.84	13.50	6.95	623	60.1	5.68	8.32
	21-Apr-22	--	53.54	2,193.71	11.00	6.61	558	185.3	7.27	0.63
	26-Apr-23	--	53.11	2,194.14	11.20	6.86	783	145.1	2.40	0.00
31-Jan-24	--	53.08	2,194.17	10.30	6.84	780	107.8	14.74	0.70	
24-Apr-24	--	52.72	2,194.53	11.50	6.73	507.00	111.70	4.06	0.01	
18-Jul-24	--	52.79	2,194.46	13.20	6.85	710.00	242.00	4.88	0.14	
31-Oct-24	--	53.33	2,193.92	10.80	7.16	612.00	157.90	3.49	0.10	
16-Jan-25'	--	52.21	2,195.04	10.00	6.85	759.00	175.50	2.10	0.21	

**TABLE 1**  
**GROUNDWATER AND SURFACE WATER ELEVATIONS AND FIELD PARAMETERS**  
 HEGLAR KRONQUIST LANDFILL COMPLIANCE MONITORING  
 MEAD, WASHINGTON  
 FILE NO. 0202596-005

Sample Location	Date of Measurement	Top of Casing Elevation in feet (NAVD88)	Depth to Water (feet) <sup>1</sup>	Groundwater & Surface Water Elevation in feet above msl	Temperature	pH	Conductivity	ORP	Turbidity	DO	
					[°C]		[µS/cm]	[mV]	[NTU]	[mg/L]	
MW-5	29-Sep-10	2,228.26	--	--	--	--	778	--	--	--	
	23-Jan-11	--	33.96	2,194.30	8.50	7.40	694	--	3.07	--	
	25-Apr-11	--	33.58	2,194.68	9.86	6.99	780	--	3.67	--	
	28-Oct-15	--	35.36	2,192.90	10.35	7.31	569	176	65.3	9.07	
	26-Jan-16	--	34.27	2,193.99	9.96	7.20	538	133	5.30	9.11	
	22-Apr-16	--	34.17	2,194.09	10.45	7.21	1,216	163	8.20	9.60	
	26-Jul-16	--	34.40	2,193.86	11.01	7.21	533	69	6.70	9.02	
	21-Oct-16	--	34.66	2,193.60	10.52	10.69	559	75	7.20	9.04	
	24-Jan-17	--	34.35	2,193.91	9.98	7.21	1,016	147	11.4	8.90	
	24-Apr-17	--	32.69	2,195.57	10.13	7.09	1,449	230	4.10	10.2	
	10-Jan-18	--	33.40	2,194.86	9.34	7.34	860	231	3.60	9.66	
	19-Apr-18	--	32.73	2,195.53	10.11	6.94	763	248	8.70	9.47	
	12-Oct-18	--	33.86	2,194.40	9.95	7.17	848	236	13.6	8.80	
	12-Apr-19	--	33.57	2,194.69	10.12	7.26	750	149	0.00	9.10	
	23-Oct-19	--	34.19	2,194.07	9.91	7.31	800	227	1.59	9.01	
	4-May-20	--	34.06	2,194.20	10.08	7.04	950	237	2.28	9.41	
	15-Oct-20	--	34.28	2,193.98	9.91	7.12	766	193	0.00	9.58	
	21-Apr-21	--	34.19	2,194.07	9.90	6.83	541	91	4.29	8.30	
	21-Apr-22	--	34.98	2,193.28	9.40	7.14	520	161	5.70	9.46	
	26-Apr-23	--	34.63	2,193.63	10.1	7.17	775	160	3.05	9.31	
31-Jan-24	--	34.69	2,193.57	<b>No longer sampled based on 2023 Assessment Plan</b>							
31-May-24	--	34.36	2,193.90	--	--	--	--	--	--		
18-Jul-24	--	34.47	2,193.79	--	--	--	--	--	--		
3-Oct-24	--	34.90	2,193.36	--	--	--	--	--	--		
16-Jan-25	--	34.07	2,194.19	--	--	--	--	--	--		
MW-6	26-Jan-16	--	--	--	--	--	--	--	--	--	
	22-Apr-16	--	--	--	--	--	--	--	--	--	
<b>Well damaged, decommissioned, and replaced with MW-7.</b>											
MW-7	26-Jul-16	2166.67*	44.99	2,121.68	10.60	7.20	420	54	22.00	9.97	
	21-Oct-16	--	46.38	2,120.29	10.46	10.46	427	72	15.80	9.50	
	24-Jan-17	--	46.13	2,120.54	9.75	7.00	402	150	25.00	8.79	
	24-Apr-17	--	36.01	2,130.66	9.21	7.08	1,335	177	4.80	9.16	
	10-Jan-18	--	40.55	2,126.12	9.56	7.14	696	228	3.80	8.52	
	19-Apr-18	--	38.18	2,128.49	8.76	7.10	609	211	0.47	8.60	
	12-Oct-18	--	40.45	2,126.22	9.58	7.05	726	226	16.50	7.71	
	12-Apr-19	--	40.88	2,125.79	10.11	7.09	634	99	8.35	8.09	
	23-Oct-19	--	42.64	2,124.03	9.71	7.11	670	221	12.34	8.05	
	4-May-20	--	42.60	2,124.07	9.94	6.81	780	173	2.01	8.73	
	15-Oct-20	--	43.59	2,123.08	9.76	6.41	641	179	0.00	8.46	
	21-Apr-21	--	43.88	2,122.79	11.60	7.21	468	80	6.82	7.95	
	21-Apr-22	--	45.65	2,121.02	9.60	6.85	452	180	5.94	8.44	
	26-Apr-23	--	46.02	2,120.65	9.7	6.99	668	153	5.27	8.18	
	31-Jan-24	--	47.48	2,119.19	<b>No longer sampled based on 2023 Assessment Plan</b>						
	31-May-24	--	45.38	2,121.29	--	--	--	--	--	--	
18-Jul-24	--	45.53	2,121.14	--	--	--	--	--	--		
31-Oct-24	--	47.02	2,119.65	--	--	--	--	--	--		
16-Jan-25	--	49.97	2,116.7	--	--	--	--	--	--		
<b>Domestic Wells</b>											
DW-1	29-Apr-24	--	--	--	10.10	7.30	709	209	0.51	10.03	
	18-Jul-24	--	--	--	16.70	7.47	724	190	2.95	8.53	
	31-Oct-24	--	--	--	12.00	7.62	608	147	15.21	9.00	
	16-Jan-25	--	--	--	5.9	7.35	737	103.9	0.31	9.16	
DW-2	29-Apr-24	--	--	--	10.60	7.06	770	218	18.87	8.74	
	18-Jul-24	--	--	--	16.50	7.31	800	199	0.00	8.76	
	31-Oct-24	--	--	--	13.50	7.45	652	159	41.59	8.80	

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 MEAD, WASHINGTON  
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Sample Location	Date of Measurement	Top of Casing Elevation in feet (NAVD88)	Depth to Water (feet) <sup>1</sup>	Groundwater & Surface Water Elevation in feet above msl	Temperature	pH	Conductivity	ORP	Turbidity	DO
					[°C]		[µS/cm]	[mV]	[NTU]	[mg/L]
	7-Feb-25	--	--	--	7.9	7.19	792	142.1	26.31	8.63
	<i>Surface Springs</i>									
SW-1	14-May-10	--	--	2149.69	--	--	694	--	--	--
	28-Oct-15	--	--		9.73	7.11	1,194	183	10.4	8.51
	26-Jan-16	--	--		8.46	7.35	444	94	0.00	7.87
	22-Apr-16	--	--		11.12	7.56	2,023	128	1.10	7.89
	26-Jul-16	--	--		14.29	7.30	479	38	0.00	7.06
	21-Oct-16	--	--		10.21	9.80	472	140	0.80	8.73
	24-Jan-17	--	--		7.21	7.68	394	207	0.00	11.77
	24-Apr-17	--	--		9.24	7.24	1,370	171	0.90	9.03
	10-Jan-18	--	--		7.87	7.32	713	241	0.80	10.35
	19-Apr-18	--	--		9.44	7.09	615	220	0.64	8.64
	12-Oct-18	--	--		9.57	6.99	694	249	10.5	8.74
	12-Apr-19	--	--		9.54	7.23	595	93	3.38	8.34
	23-Oct-19	--	--		8.77	7.19	650	230	0.00	9.11
	4-May-20	--	--		11.95	7.77	690	233	0.01	8.81
	15-Oct-20	--	--		8.32	7.18	635	176	0.00	10.14
	21-Apr-21	--	--		6.90	7.29	420	80	0.00	7.92
21-Apr-22	--	--	7.60	7.12	422	195	0.00	11.07		
26-Apr-23	--	--	8.7	7.29	671	123	0.46	9.67		
SW-3	14-May-10	--	--	2,116.48	--	--	1,577	--	--	--
	28-Oct-15	--	--		9.68	7.14	1,207	182	0.90	8.49
	26-Jan-16	--	--		9.14	6.85	1,275	116	0.00	7.96
	22-Apr-16	--	--		12.62	7.45	4,119	135	41.3	8.08
	26-Jul-16	--	--		9.73	7.69	1,219	36	7.40	7.75
	21-Oct-16	--	--	9.77	7.36	880	122	0.00	8.63	
	24-Jan-17	--	--	2,116.48	9.22	7.39	1,452	271	0.00	11.06
	24-Apr-17	--	--		10.39	7.22	2,179	169	1.20	8.51
	10-Jan-18	--	--		9.80	7.10	1,407	232	0.70	8.04
	19-Apr-18	--	--		10.99	6.73	1,225	231	13.9	7.53
	12-Oct-18	--	--		11.20	7.04	1,317	233	31.0	7.11
	12-Apr-19	--	--		11.14	7.10	1,071	94	0.00	7.63
	23-Oct-19	--	--		9.56	7.11	1,200	201	0.00	8.49
	4-May-20	--	--		10.23	7.21	1,380	205	0.00	8.79
	15-Oct-20	--	--		9.64	7.06	1,173	176	0.00	8.89
	21-Apr-21	--	--		9.70	7.42	839	83	4.02	6.63
	21-Apr-22	--	--		9.60	7.05	889	190	204.62	9.18
	26-Apr-23	--	--		9.70	7.23	493	134	16.44	9.03
	31-Jan-24	--	--		9.60	7.03	711	185	49.09	8.94
	24-Apr-24	--	--		9.70	6.98	833	270	162.27	8.59
18-Jul-24	--	--	16.30		7.69	1,247	224	1.75	8.82	
31-Oct-24	--	--	9.40	7.61	697	161	92.35	9.80		
16-Jan-25	--	--	7.8	7.45	1330	97.7	-0.42	10.78		

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Sample Location	Date of Measurement	Top of Casing Elevation in feet (NAVD88)	Depth to Water (feet) <sup>1</sup>	Groundwater & Surface Water Elevation in feet above msl	Temperature	pH	Conductivity	ORP	Turbidity	DO	
					[°C]		[μS/cm]	[mV]	[NTU]	[mg/L]	
SW-5	14-May-10	--	--	2,058.38	--	--	1,403	--	--	--	
	28-Oct-15	--	--		--	--	--	--	--	--	
	26-Jan-16	--	--		--	--	--	--	--	--	
	22-Apr-16	--	--		--	--	--	--	--	--	
	26-Jul-16	--	--		--	--	--	--	--	--	
	21-Oct-16	--	--		--	--	--	--	--	--	
	24-Jan-17	--	--		--	1.68	7.56	1,214	323	33.0	9.90
	24-Apr-17	--	--		--	16.30	7.76	1,424	172	4.30	8.90
	10-Jan-18	--	--		--	3.60	7.82	1,163	240	4.80	10.49
	19-Apr-18	--	--		--	19.74	8.14	876	160	26.4	8.45
	12-Oct-18	--	--		--	11.70	7.76	823	242	63.0	8.23
	12-Apr-19	--	--		--	11.78	7.87	1,021	74	9.61	7.97
	23-Oct-19	--	--		--	8.51	7.86	1,140	188	0.00	9.45
	4-May-20	--	--		--	13.93	7.79	1,530	208	4.55	8.68
	15-Oct-20	--	--		--	7.89	7.64	1,061	143	0.00	10.08
	21-Apr-21	--	--		--	15.50	7.48	954	63	5.20	11.47
	21-Apr-22	--	--		--	7.30	7.55	823	193	109.40	192.80
	26-Apr-23	--	--		--	14.80	7.91	611	142	31.24	9.76
	31-Jan-24	--	--		--	1.60	7.76	864	119	396.76	12.04
	24-Apr-24	--	--		--	9.70	6.98	864	119	396.76	12.04
18-Jul-24	--	--	--	19.40	7.95	1,310	263	1.05	6.21		
31-Oct-24	--	--	--	5.90	7.97	1,100	158	11.70	10.20		
16-Jan-25	--	--	--	0.6	7.77	1379	85.9	-0.59	12.22		
SW-Upgradient	29-Apr-24	--	--	--	10.40	7.56	578	190	68.66	10.21	
	18-Jul-24	--	--		17.70	7.77	666	200	8.81	7.76	
	31-Oct-24	--	--		7.80	7.94	0	149	57.11	9.70	
	16-Jan-25	--	--		3.4	7.69	551	69.3	9.77	11.58	

**Notes and Abbreviations:**

Top of casing elevation measured from the top of inner PVC casing (Survey completed in 2010 by Exponent).  
 Italicized parameters are from Exponent's Final Remedial Investigation Report (September 9, 2011) and Final Feasibility Study (May 4, 2012), prior to implementation of the Final Cleanup Action Plan.  
 2023 Assessment Report refers to "Heglar-Kronquist Landfill Assessment Report" dated December 2023.  
 1 Groundwater elevation was calculated by subtracting the measured depth to water from the top of casing elevation.  
 - = not applicable  
 \* = Casing elevation determined by measuring the difference in casing elevations between MW-6 and MW-7 during installation of MW-7 on June 16, 2016.  
 °C = degrees Celsius  
 μs/cm - microsiemens per centimeter  
 btoc = below top of casing  
 DO = dissolved oxygen  
 mg/L = milligrams per liter  
 msl = mean sea level  
 mV = millivolts  
 NAVD88 = North American Vertical Datum of 1988  
 NTU = nephelometric turbidity units  
 ORP = oxidation-reduction potential

**TABLE 2**  
**GAS VENT AVERAGE AMMONIA CONCENTRATIONS**  
 HEGLAR KRONQUIST LANDFILL COMPLIANCE MONITORING  
 MEAD, WASHINGTON  
 FILE NO. 0202596-005

Gas Vent Location	Month - Year	Ammonia Concentrations (ppm)	
		Average Concentration	Maximum Concentration
GV-9	Jan-24	99	99
	Apr-24	1	2
	Jul-24	97	99
	Oct-24	0	0
	Jan-25	30	30
GV-11	Jan-24	0	1
	Apr-24	0	0
	Jul-24	19	20
	Oct-24	0	0
	Jan-25	0	0
GV-12	Jan-24	1	1
	Apr-24	0	1
	Jul-24	12	13
	Oct-24	0	0
	Jan-25	1	1
<b>Gas vents added to monitoring schedule (2025)</b>			
GV-1	Jan-25	0	0
GV-2		0	0
Gv-3		0	0
GV-4		0	0
GV-5		0	0
GV-6		0	0
Gv-7		0	0
GV-8		0	0
GV-10		87	87
GV-13		0	0
GV-14		1.6	2
GV-15		0	0
GV-16		97	97
GV-17		1	1
<b>Abbreviations:</b> GV = gas vent ppm = parts per million			

**TABLE 3**  
**GROUNDWATER CHEMICAL ANALYTICAL RESULTS**  
 HEGLAR KRONQUIST LANDFILL COMPLIANCE MONITORING  
 MEAD, WASHINGTON  
 FILE NO. 0202596-005

Sample Location	Date	Chloride	Dissolved Sodium	Nitrate/ Nitrite as Nitrogen*	Total Dissolved Solids
		mg/L			
<i>Monitoring Wells</i>					
MW-1	30-Sep-10	77.2	84.2	17.70	489
	24-Jan-11	70.7	85.5	17.90	532
	25-Apr-11	425	166	31.50	1,190
	28-Oct-15	44.1	83.9	14.70	507
	26-Jan-16	52.6	84.6	17.00	487
	22-Apr-16	77.1	93.1	19.20	529
	26-Jul-16	85.6	90.2	21.30	650
	21-Oct-16	74.6	81.0	21.80	596
	24-Jan-17	81.2	91.3	20.10	576
	24-Apr-17	316	185	44.90	1,140
	20-Jul-17	118	123	33.10	726
	10-Jan-18	50.6	88.9	23.90	600
	19-Apr-18	86.9	106	31.60	637
	12-Oct-18	34.8	81.6	22.10	491
	12-Apr-19	42.9	84.6	24.70	504
	23-Oct-19	35.3	75.3	19.60	484
	4-May-20	77.0	82.5	23.50	585
	15-Oct-20	50.6	72.3	23.90	539
	21-Apr-21	75.0	75.0	1.40	410
	21-Apr-22	59	63	22	50
	26-Apr-23	52	67	4.4	490
	31-Jan-24	50	64	1.3	500
	24-Apr-24	60	65	19	490
18-Jul-24	73	75	23	490	
31-Oct-24	61	62	20	450	
16-Jan-25	66	71	22	430	
MW-2	30-Sep-10	155	29.0	8.97	657
	24-Jan-11	55.6	24.3	9.36	457
	25-Apr-11	83.5	28.3	8.13	552
	28-Oct-15	99.5	25.6	10.4	640
	26-Jan-16	85.0	26.0	9.12	549
	22-Apr-16	57.9	29.1	7.81	499
	26-Jul-16	82.7	25.5	10.1	737
	24-Oct-16	89.9	24.0	13.00	592
	24-Jan-17	91.1	23.8	11.90	600
	24-Apr-17	48.8	27.9	8.65	494
	20-Jul-17	94.2	30.2	8.50	585
	10-Jan-18	--	--	--	--
	19-Apr-18	93.5	30.5	13.20	600
	12-Oct-18	85.5	31.0	15.90	631
	12-Apr-19	80.5	32.4	14.50	589
	23-Oct-19	67.0	37.9	15.40	630
	4-May-20	67.9	27.4	14.60	641
	15-Oct-20	65.1	26.8	16.60	617
21-Apr-21	77.0	26.0	1.10	520	
21-Apr-22	76	23	14.00	560	
26-Apr-23	67	27	2.0	460	

**TABLE 3**  
**GROUNDWATER CHEMICAL ANALYTICAL RESULTS**  
 HEGLAR KRONQUIST LANDFILL COMPLIANCE MONITORING  
 MEAD, WASHINGTON  
 FILE NO. 0202596-005

Sample Location	Date	Chloride		Dissolved Sodium		Nitrate/ Nitrite as Nitrogen*		Total Dissolved Solids	
		mg/L							
MW-3	1-Oct-10	788		235.0		31.40		1,980	
	25-Jan-11	656		258.0		--		1,600	J
	26-Apr-11	741		274.0		31.10		1,710	
	28-Oct-15	671		299.0		23.7		1,670	
	26-Jan-16	679		295.0		24.4		1,680	
	22-Apr-16	607		276.0		21.5		1,530	
	26-Jul-16	615		266.0		22.1	J	1,700	J
	21-Oct-16	578		272.0		24.90		1,410	
	24-Jan-17	561		259.0		23.90		1,360	
	24-Apr-17	678		272.0		38.80		1,590	
	20-Jul-17	525		231.0		37.70		1,420	
	10-Jan-18	462		215.0		0.66		1,370	
	19-Apr-18	493		228.0		36.20		1,320	
	12-Oct-18	381		196.0		30.60		1,140	
	12-Apr-19	475		227.0		26.00		1,160	
	23-Oct-19	444		222.0		24.40		1,210	
	4-May-20	480		226.0		21.70		1,310	
	15-Oct-20	458		215.0		23.40		1,300	
	21-Apr-21	590		230.0		1.90		1,200	
	21-Apr-22	710		210		22		1,200	
	23-Apr-23	540		220		3.4		1,200	
	31-Jan-24	620		210		1.3		1,200	
	24-Apr-24	540		200		18		1,200	
18-Jul-24	540		220		19		1,100		
31-Oct-24	550		200		20		1,000		
16-Jan-25	520		200		18		950		
MW-4	30-Sep-10	175		82.3		42.00		883	
	24-Jan-11	445		154		53.80		1,550	
	26-Apr-11	943		254		76.30		2,210	
	28-Oct-15	97.2		81.4		36.3		717	
	26-Jan-16	97.0		76.1		35.3		679	
	22-Apr-16	124		85.5		43		804	
	26-Jul-16	121		78.4		43.9	J	1,050	J
	21-Oct-16	90.6		68.3		46.40		754	
	24-Jan-17	76.1		71.8		40.70		765	
	24-Apr-17	44.7		64.7		38.90		671	
	20-Jul-17	40.6		60.8		37.50		653	
	10-Jan-18	33.5		58.1		35.60		655	
	19-Apr-18	32.0		57.2		22.10		529	
	12-Oct-18	28.8		59.2		33.70		647	
	12-Apr-19	24.1		57.6		36.40		593	
	23-Oct-19	19.0		45.8		28.40		615	
	4-May-20	21.4		48.7		25.00		558	
	15-Oct-20	30.3		49.0		29.80		579	
	21-Apr-21	29.0		43.0		5.90		510	
21-Apr-22	26		34		29		510		
23-Apr-23	26		49		5.4		670		
31-Jan-24	28		45		1.5		660		

**TABLE 3**  
**GROUNDWATER CHEMICAL ANALYTICAL RESULTS**  
 HEGLAR KRONQUIST LANDFILL COMPLIANCE MONITORING  
 MEAD, WASHINGTON  
 FILE NO. 0202596-005

Sample Location	Date	Chloride		Dissolved Sodium		Nitrate/ Nitrite as Nitrogen*		Total Dissolved Solids	
		mg/L							
	24-Apr-24	24		38		25		670	
	18-Jul-24	25		42		23		450	
	31-Oct-24	28		43		24		400	
	16-Jan-25	28		50		27		420	
MW-4 Field Duplicate (MW-400)	28-Oct-15	94.8		78.8		36.5		709	
	26-Jan-16	70.7		74.4		35		697	
	22-Apr-16	122		85.9		43.3		824	
	26-Jul-16	116		80.8		42.9		1,050	
	21-Oct-16	91.0		70.1		46.90		753	
	24-Jan-17	74.5		70.2		40.90		709	
	24-Apr-17	43.6		67.6		39.10		649	
	20-Jul-17	39.9		60.4		36.60		648	
	10-Jan-18	34.2		59.0		35.80		656	
	19-Apr-18	31.8		57.9		21.30		526	
	12-Oct-18	27.9		61.2		32.40		612	
	12-Apr-19	24.8		59.8		36.50		592	
	23-Oct-19	20.1		45.2		28.70		569	
	4-May-20	21.9		48.8		24.90		561	
	15-Oct-20	24.5		48.7		30.40		588	
	21-Apr-21	23.0		43.0		5.90		490	
	21-Apr-22	26		35		29		530	
	26-Apr-23	25		47		6.3		500	
	31-Jan-24	28		45		1.2		510	
	24-Apr-24	24		41		25		500	
18-Jul-24	26		43		24		460		
31-Oct-24	28		42		23		430		
16-Jan-25	28		49		27		440		
MW-5	29-Sep-10	19.4		32.1		14.40		496	
	23-Jan-11	17.9		31.8		14.20		500	
	25-Apr-11	18.9		32.2		13.20		488	
	28-Oct-15	17.2		37.3		13		504	
	26-Jan-16	15.3		33.4		13.4		491	
	22-Apr-16	19.1		33.3		12.4		508	
	26-Jul-16	20.9		33.3		13.4	J	573	J
	21-Oct-16	18.9		33.2		14.90		503	
	24-Jan-17	18.6		33.8		13.70		481	
	24-Apr-17	19.9		31.6		11.40		462	
	20-Jul-17	19.4		31.4		12.10		481	
	10-Jan-18	19.3		31.4		13.20		508	
	19-Apr-18	18.7		31.1		12.50		475	
	12-Oct-18	18.0		33.0		13.30		472	
	12-Apr-19	18.7		34.1		13.30		459	
	23-Oct-19	17.6		34.2		13.90		512	
	4-May-20	18.5		34.1		12.40		503	
	15-Oct-20	17.5		33.1		14.40		528	
21-Apr-21	20.0		32.0		1.70		450		
21-Apr-22	19		31		15		540		
26-Apr-23	19		33		2.6		350		

**TABLE 3**  
**GROUNDWATER CHEMICAL ANALYTICAL RESULTS**  
 HEGLAR KRONQUIST LANDFILL COMPLIANCE MONITORING  
 MEAD, WASHINGTON  
 FILE NO. 0202596-005

Sample Location	Date	Chloride		Dissolved Sodium		Nitrate/ Nitrite as Nitrogen*		Total Dissolved Solids	
		mg/L							
MW-6	29-Sep-10	15.6		18.6		4.95		545	
	23-Jan-11	19.0		23.6		7.04		425	
	25-Apr-11	19.3		24.2		7.65		430	
	28-Oct-15	Well damaged, no sample collected.							
	26-Jun-16	Well decommissioned.							
MW-7	26-Jul-16	19.3		25.0		7.01		521	
	21-Oct-16	17.6		23.1		7.30		394	
	24-Jan-17	19.8		26.0		7.56		397	
	24-Apr-17	19.4		24.4		7.06		403	
	20-Jul-17	20.7		25.7		7.88		423	
	10-Jan-18	20.8		25.0		8.58		429	
	19-Apr-18	17.3		24.8		6.19		383	
	12-Oct-18	19.5		26.2		8.20		424	
	12-Apr-19	19.6		27.5		8.61		408	
	23-Oct-19	18.8		26.5		8.42		417	
	4-May-20	19.2		26.1		7.91		433	
	15-Oct-20	26.2		25.2		9.20		418	
	21-Apr-21	23.0		25.0		1.10		490	
	21-Apr-22	24		24		10		460	
26-Apr-23	22		28		1.8		360		
<b>Domestic Wells</b>									
DW-1	29-Apr-24	19.0		33.0		15.0		290	
	18-Jul-24	20.0		36.0		17.0		420	
	31-Oct-24	22.0		34.0		15.0		430	
	16-Jan-25	22		36		17		450	
DW-2	29-Apr-24	26.0		29.0		19.0		280	
	18-Jul-24	27.0		32.0		20.0		480	
	31-Oct-24	27.0		30.0		18.0		440	
	16-Jan-25	26	J	29		18		470	
<b>Federal or State Cleanup Standard</b>		250		--		14		--	
<p><b>Notes and Abbreviations:</b></p> <p><b>Bold</b> values denote a detected concentration.</p> <p><i>Italicized values</i> are from Exponent's Final Remedial Investigation Report (September 9, 2011) and Final Feasibility Study (May 4, 2012), prior to implementation of the Final Cleanup Action Plan.</p> <p>Shaded cell denotes concentrations that meet or exceed the cleanup standard. The exceeded cleanup standard is also shaded.</p> <p>Chloride cleanup level based on federal and state drinking water secondary maximum contaminant level based on taste and odor concerns.</p> <p>Nitrite cleanup level based on background concentrations in groundwater.</p> <p>EPA's recommended range for sodium for most individuals is 30,000 to 60,000 µg/L based on aesthetic effects (taste). The EPA recommended level for sodium-sensitive consumers is 20,000 µg/L (see WAC 246-290-310(3)(a)). The upper level of the EPA's recommended range for most individuals of 60,000 µg/L is used for comparison.</p> <p>2023 Assessment Report refers to the Heglar-Kronquist Landfill Assessment Report dated December 2023.</p> <p>* = results beginning October 2015 are nitrate and nitrite as nitrogen</p> <p>-- = not analyzed for or not available</p> <p>J = estimated value</p> <p>mg/L = milligrams per liter</p> <p>µg/L = micrograms per liter.</p>									

**TABLE 4**  
**SURFACE WATER CHEMICAL ANALYTICAL RESULTS**  
 HEGLAR KRONQUIST LANDFILL COMPLIANCE MONITORING  
 MEAD, WASHINGTON  
 FILE NO. 0202596-005

Sample Location	Date	Chloride	Total Sodium	Nitrate/ Nitrite as Nitrogen*	Total Dissolved Solids
<i>Surface Spring</i>		Concentrations in mg/L			
SW-1	26-Jan-16	20.7	25.5	9.0	419
	22-Apr-16	20.0	26.4	8.4	431
	26-Jul-16	21.6	25.7	8.3 J	576 J
	21-Oct-16	20.6	27.0	10.0	443
	24-Jan-17	21.7	27.0	9.5	422
	24-Apr-17	20.0	27.6	8.1	413
	20-Jul-17	20.9	25.4	7.1	410
	10-Jan-18	21.1	25.1	8.4	428
	19-Apr-18	17.6	24.6	7.69	387
	12-Oct-18	19.0	25.7	7.58	407
	12-Apr-19	19.9	27.1	9.02	401
	23-Oct-19	19.2	26.6	9.04	422
	4-May-20	20.5	26.5	8.68	415
	15-Oct-20	20.0	25.9	9.9	420
	21-Apr-21	24.0	25.0	1.3	380
	21-Apr-22	24	23	11	460
	26-Apr-23	23	24	2.0	280
SW-2	14-May-10	22	28	9.9 J	408
SW-3	14-May-10	301.0	111.0	18.0 J	821
	28-Oct-15	272	130.0	15.3	932
	26-Jan-16	269	116.0	15.7	925
	22-Apr-16	256	118.0	14.4	860
	26-Jul-16	251	112.0	15.0 J	1,110 J
	21-Oct-16	259	115.0	16.7	848
	24-Jan-17	258	120.0	15.3	825
	24-Apr-17	261	119.0	16.6	878
	20-Jul-17	283	126.0	20.1	907
	10-Jan-18	200	103.0	17.8	842
	19-Apr-18	182	98.2	16.5	698
	12-Oct-18	181	103.0	16.6	728
	12-Apr-19	168	97.1	16.5	701
	23-Oct-19	146	91.2	14.5	700
	4-May-20	157	89.1	13.1	681
	15-Oct-20	158	90.4	15.5	702
	21-Apr-21	190	95.0	2.4	650
	21-Apr-22	290	88	17	670
	26-Apr-23	240	100	2.9	600
31-Jan-24	260	94	0.9	590	
24-Apr-24	240	91	15	600	
18-Jul-24	220	91	14	670	
31-Oct-24	270	93	14	680	
16-Jan-25	270	96	14	650	
SW-3 Field Duplicate	28-Oct-15	265	121.0	15.1	887
	26-Jan-16	273	116.0	15.7	912
	22-Apr-16	247	115.0	14.4	881
	26-Jul-16	250	111.0	15.0 J	1,090 J
	21-Oct-16	250	117.0	16.6	862
	24-Jan-17	253	119.0	15.3	826
	24-Apr-17	251	119.0	16.6	869
	20-Jul-17	283	124.0	19.7	926
	10-Jan-18	194	102.0	17.8	854
	19-Apr-18	183	94.7	15.6	744
	12-Oct-18	187	96.4	13.5	748
	12-Apr-19	168	96.5	16.4	694
	23-Oct-19	90	89.6	14.8	711
4-May-20	153	87.9	13.3	722	

**TABLE 4**  
**SURFACE WATER CHEMICAL ANALYTICAL RESULTS**  
 HEGLAR KRONQUIST LANDFILL COMPLIANCE MONITORING  
 MEAD, WASHINGTON  
 FILE NO. 0202596-005

Sample Location	Date	Chloride	Total Sodium	Nitrate/ Nitrite as Nitrogen*	Total Dissolved Solids
<i>Surface Spring</i>		Concentrations in mg/L			
SW-3 Field Duplicate (continued)	15-Oct-20	<b>163</b>	<b>88.7</b>	<b>15.4</b>	<b>714</b>
	21-Apr-21	<b>200</b>	<b>98.0</b>	<b>3.0</b>	<b>670</b>
	21-Apr-22	<b>250</b>	<b>88</b>	<b>16</b>	<b>660</b>
	26-Apr-23	<b>220</b>	<b>94</b>	<b>2.6</b>	<b>880</b>
	31-Jan-24	<b>260</b>	<b>93</b>	<b>1.0</b>	<b>900</b>
	24-Apr-24	<b>230</b>	<b>91.0</b>	<b>15</b>	<b>870</b>
	18-Jul-24	<b>210</b>	<b>93.0</b>	<b>14</b>	<b>700</b>
	31-Oct-24	<b>260</b>	<b>92.0</b>	<b>14</b>	<b>590</b>
	16-Jan-25	<b>270</b>	<b>97</b>	<b>16</b>	<b>680</b>
SW-5	<i>14-May-10</i>	<b>252</b>	<b>96.1</b>	<b>14.8</b>	<b>739</b>
	28-Oct-15	Spring Dry During Sampling Event			
	26-Jan-16				
	22-Apr-16				
	26-Jul-16				
	21-Oct-16				
	24-Jan-17	<b>228</b>	<b>106.0</b>	<b>1.1</b>	<b>752</b>
	24-Apr-17	<b>121</b>	<b>67.3</b>	<b>7.5</b>	<b>563</b>
	20-Jul-17	<b>191</b>	<b>96.6</b>	<b>3.7</b>	<b>746</b>
	10-Jan-18	<b>145</b>	<b>77.6</b>	<b>8.2</b>	<b>694</b>
	19-Apr-18	<b>93.6</b>	<b>63.3</b>	<b>5.89</b>	<b>501</b>
	12-Oct-18	<b>167</b>	<b>82.9</b>	<b>5.38</b>	<b>696</b>
	12-Apr-19	<b>136</b>	<b>80.5</b>	<b>7.08</b>	<b>568</b>
	23-Oct-19	<b>141</b>	<b>85.0</b>	<b>3.78</b>	<b>684</b>
	4-May-20	<b>149</b>	<b>82.6</b>	<b>1.79</b>	<b>661</b>
	15-Oct-20	<b>142</b>	<b>80.4</b>	<b>6.6</b>	<b>676</b>
	21-Apr-21	<b>200</b>	<b>88.0</b>	<b>0.2</b>	<b>640</b>
	21-Apr-22	<b>280</b>	<b>87</b>	<b>3.2</b>	<b>680</b>
	26-Apr-23	<b>230</b>	<b>92</b>	<b>0.3</b>	<b>700</b>
	31-Jan-24	<b>250</b>	<b>84</b>	<b>0.25</b>	<b>690</b>
24-Apr-24	<b>220</b>	<b>91</b>	<b>5.2</b>	<b>710</b>	
18-Jul-24	<b>230</b>	<b>100</b>	<b>3.1</b>	<b>760</b>	
31-Oct-24	<b>280</b>	<b>94</b>	<b>6.4</b>	<b>660</b>	
16-Jan-25	<b>270</b>	<b>93</b>	<b>7.0</b>	<b>630</b>	
SW-Upgradient	29-Apr-24	<b>5.5</b>	<b>18.0</b>	<b>14.0</b>	<b>460</b>
	18-Jul-24	<b>9.5</b>	<b>20.0</b>	<b>17.0</b>	<b>440</b>
	31-Oct-24	<b>8.6</b>	<b>19.0</b>	<b>15.0</b>	<b>320</b>
	16-Jan-25	<b>6.4</b>	<b>16</b>	<b>18</b>	<b>320</b>
<b>Federal or State Cleanup Standard</b>		<b>230</b>	--	<b>10</b>	--

**Notes and Abbreviations:**

**Bold** values denote a detected concentration.

*Italicized values are from Exponent's Final Remedial Investigation Report (September 9, 2011) and Final Feasibility Study (May 4, 2012), prior to implementation of the Final Cleanup Action Plan.*

*Shaded cells denote concentrations that meet or exceed the cleanup standard. The exceeded cleanup standard is also shaded.*

*Chloride cleanup level is based on federal and state drinking water secondary maximum contaminant level based on taste and odor concerns.*

*Nitrite cleanup level is based on background concentrations in groundwater.*

*The EPA's recommended range for sodium for most individuals is 30,000 to 60,000 µg/L based on aesthetic effects (taste). The EPA recommended level for sodium for sodium-sensitive consumers is 20,000 µg/L (see WAC 246-290-310(3)(a)). The upper limit of the EPA's recommended range for most individuals of 60,000 µg/L is used for comparison.*

\* = results beginning October 2015 are nitrate and nitrite as nitrogen

-- = not analyzed for or not available

J = estimated value

mg/L = milligrams per liter

µg/L = micrograms per liter

## FIGURES



GIS: \\haleyaldrich.com\share\esa\_projects\notebooks\1792605\_Heglar\_Kronquist\_Compliance\_Monitoring\GIS\GIS\202596\_HEGLAR\_KRONQUIST\_LANDFILL.aprx - overview - 12/18/2024 2:47 PM



MAP SOURCE: ESRI  
 SITE COORDINATES: 47°46'51"N, 117°14'09"W

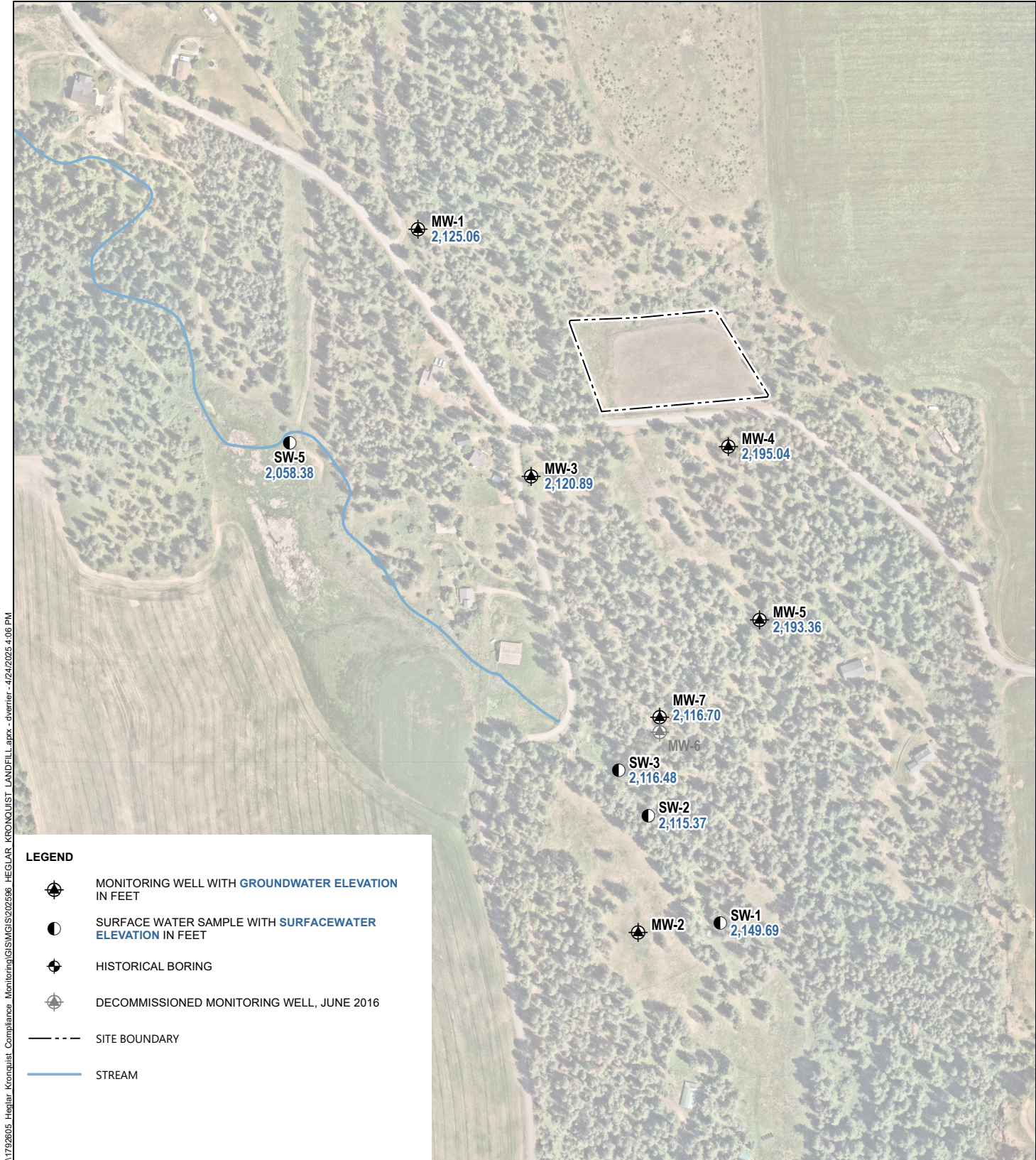


HEGLAR KRONQUIST SITE  
 MEAD, WASHINGTON

VICINITY MAP







APPROXIMATE SCALE: 1 IN = 2000 FT  
 FEBRUARY 2025

FIGURE 1



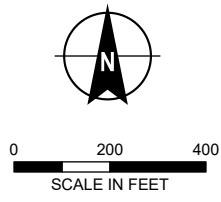
GIS: \\haleyaldrich.com\share\esa\_projects\notebooks\1792605\_Heglar\_Kronquist\_Compliance\_Monitoring\GIS\2025056\_HEGLAR\_KRONQUIST\_LANDFILL.aprx - overrier - 4/24/2025 4:06 PM

**LEGEND**

-  MONITORING WELL WITH **GROUNDWATER ELEVATION** IN FEET
-  SURFACE WATER SAMPLE WITH **SURFACEWATER ELEVATION** IN FEET
-  HISTORICAL BORING
-  DECOMMISSIONED MONITORING WELL, JUNE 2016
-  SITE BOUNDARY
-  STREAM

**NOTES**

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. THE GROUNDWATER ELEVATIONS WERE CALCULATED BY SUBTRACTING THE MEASURED DEPTH TO WATER FROM THE TOP OF CASING ELEVATION
3. MONITORING WELL AND SURFACE WATER SAMPLING LOCATIONS SURVEYED BY ADAMS AND CLARK, INC. 2011; REFERENCED TO NAD 83 WASHINGTON STATE PLANE NORTH (US FEET) AND NAVD 88.
4. AERIAL IMAGERY SOURCE: NEARMAP, MAY 21, 2023



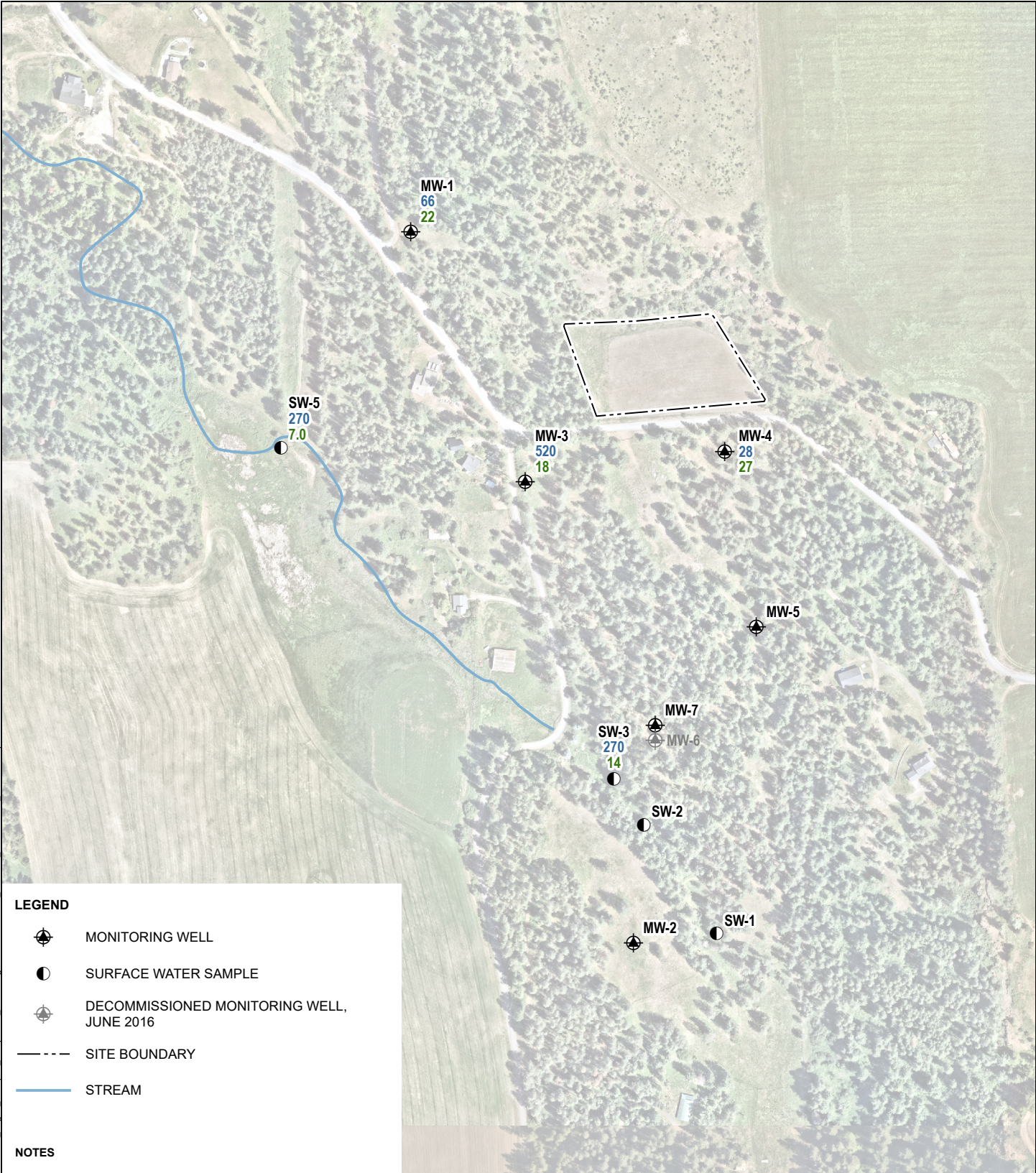
**HALEY ALDRICH** HEGLAR KRONQUIST SITE  
MEAD, WASHINGTON

**JANUARY 2025- SITE PLAN**






FEBRUARY 2025

**FIGURE 2**

GIS: \\haleyaldrich.com\share\esa\_projects\notebooks\1792805\_Heglar\_Kronquist\_Compilance\_Monitoring\GIS\2025\96\_HEGLAR\_KRONQUIST\_LANDFILL.aprx - overrier - 4/24/2025 3:54 PM



**LEGEND**

-  MONITORING WELL
-  SURFACE WATER SAMPLE
-  DECOMMISSIONED MONITORING WELL, JUNE 2016
-  SITE BOUNDARY
-  STREAM

**NOTES**

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. mg/L = MILLIGRAMS PER LITER
3. **CHLORIDE CONCENTRATION (mg/L)**
4. **NITRATE/NITRITE CONCENTRATION (mg/L)**
5. MONITORING WELL AND SURFACE WATER SAMPLING LOCATIONS SURVEYED BY ADAMS AND CLARK, INC. 2011; REFERENCED TO NAD 83 WASHINGTON STATE PLANE NORTH (US FEET) AND NAVD 88.
6. AERIAL IMAGERY SOURCE: NEARMAP, MAY 21, 2023



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HEGLAR KRONQUIST SITE  
MEAD, WASHINGTON

**CHLORIDE-NITRATE/NITRITE  
CONCENTRATIONS JANUARY 2025**





FEBRUARY 2025

**FIGURE 3**

C:\GIS\FILE PATH\ Haley Aldrich.com\share\sea\_projects\Natebooks\1792605\_Heglar\_Kronquist\_Compilance\_Monitoring\GIS\MGIS\2025\96\_HEGLAR\_KRONQUIST\_LANDFILL.aprx - USER: dvernier - LAST SAVED: 4/24/2025 3:58 PM

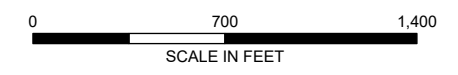


**LEGEND**

-  MONITORING WELL
-  SURFACE WATER SAMPLE
-  SITE BOUNDARY
-  TRANSPARENCY MASK FOR IMAGERY

**NOTES**

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. mg/L = MILLIGRAMS PER LITER
3. **CHLORIDE CONCENTRATION (mg/L)**
4. **NITRATE/NITRITE CONCENTRATION (mg/L)**
5. AERIAL IMAGERY SOURCE: GOOGLE

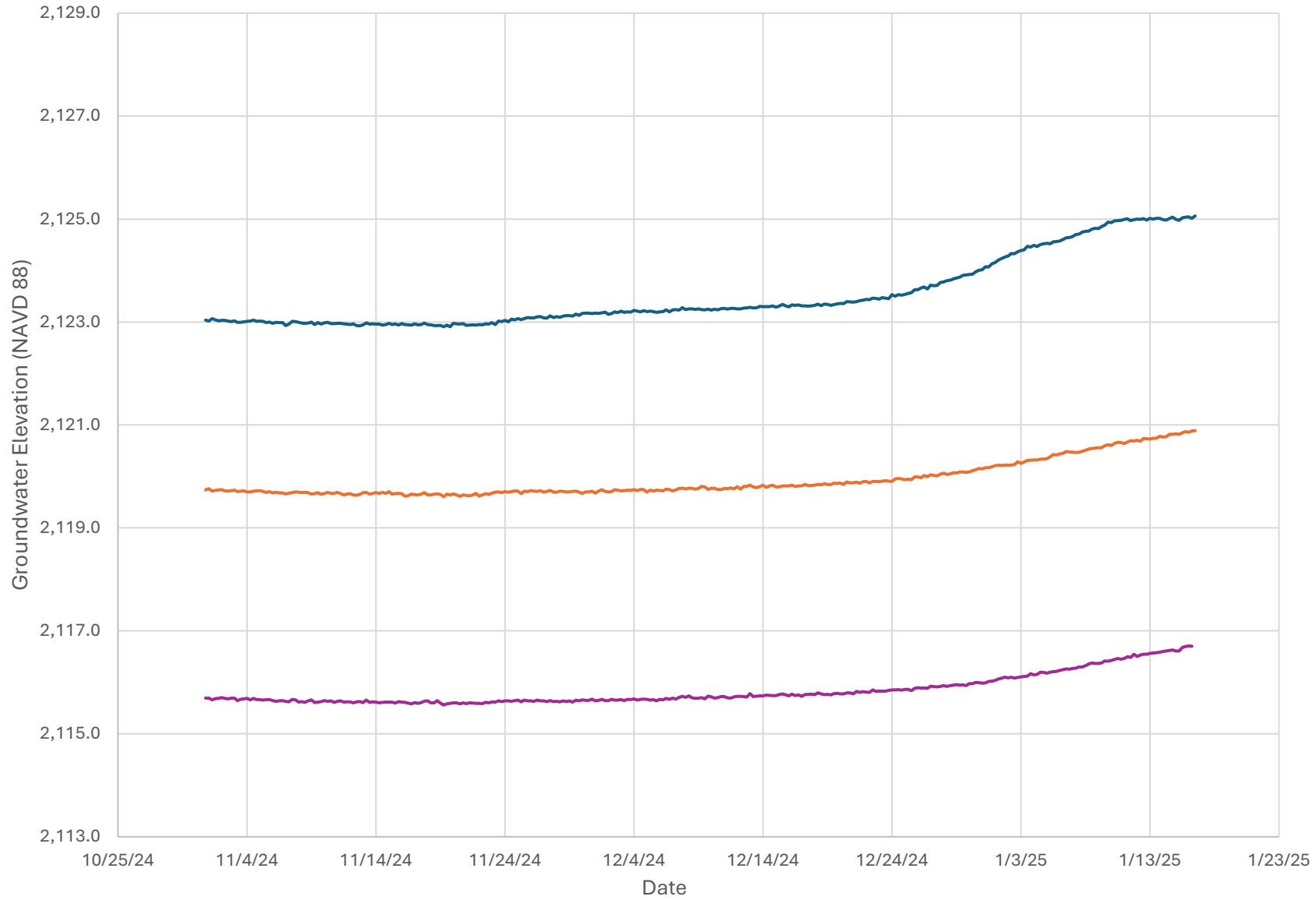


HEGLAR KRONQUIST SITE  
MEAD, WASHINGTON

**BACKGROUND  
CHLORIDE-NITRATE/NITRITE  
CONCENTRATIONS  
JANUARY 2025**

FEBRUARY 2025

**FIGURE 4**



**LEGEND**

**NOTES**



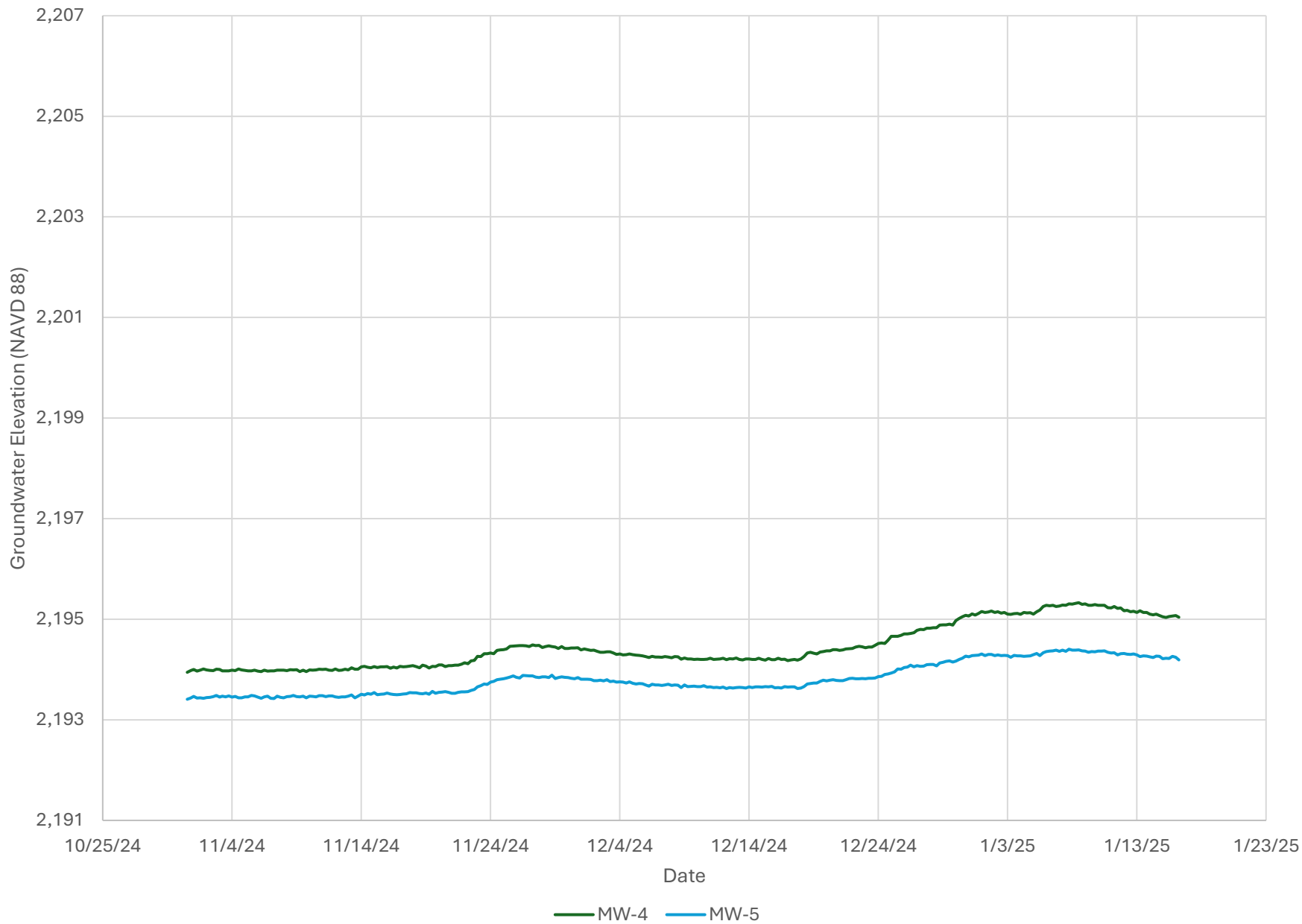
KAISER ALUMINUM INVESTMENTS COMPANY  
 HEGLAR KRONQUIST COMPLIANCE MONITORING  
 MEAD, WASHINGTON

**MONITORING WELLS 1, 3, AND 7  
 HYDROGRAPH**

SCALE: N/A  
 MAY 2025

**FIGURE 5**

— MW-1 — MW-3 — MW-7



LEGEND

NOTES



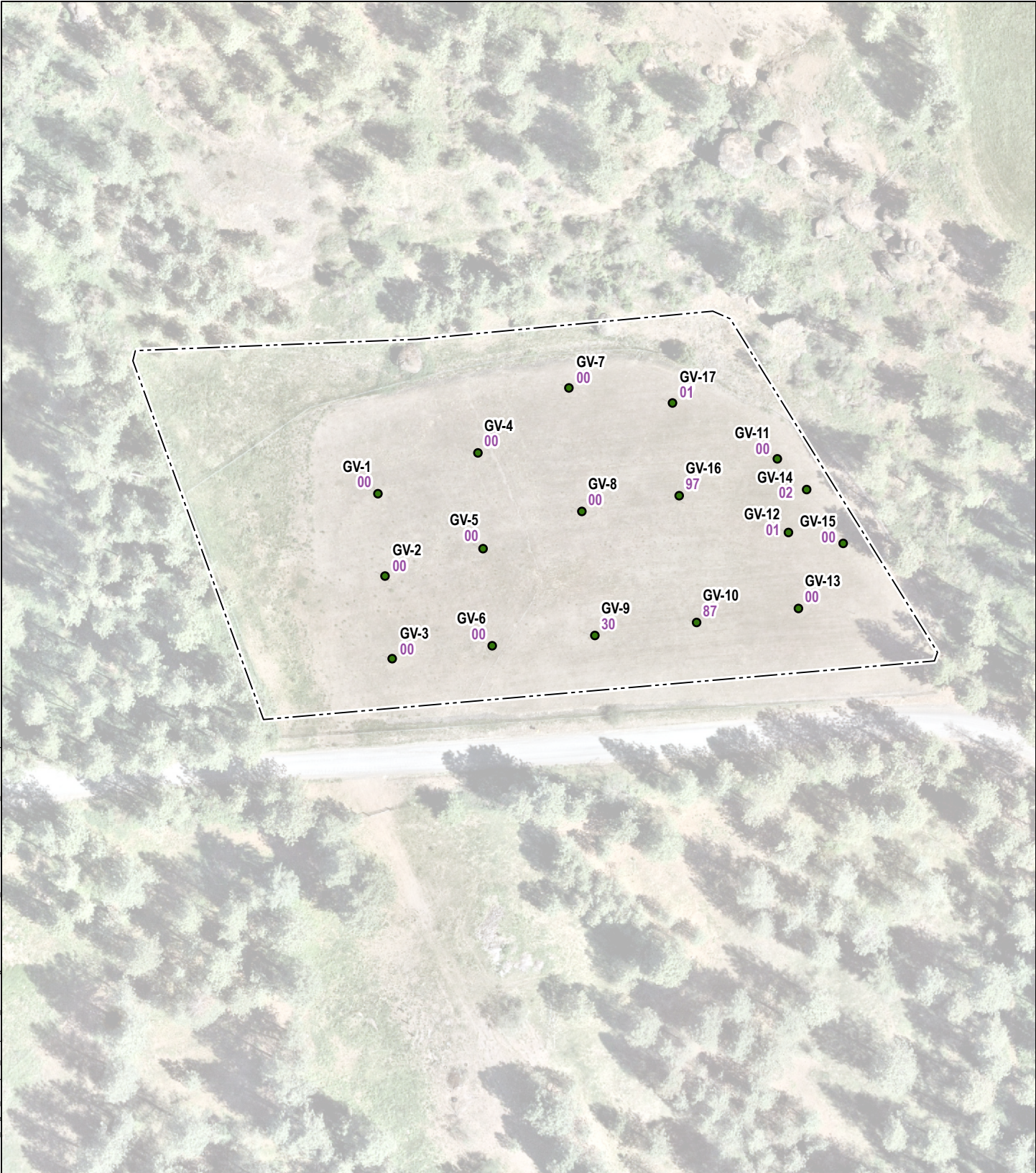
KAISER ALUMINUM INVESTMENTS COMPANY  
 HEGLAR KRONQUIST COMPLIANCE MONITORING  
 MEAD, WASHINGTON

**MONITORING WELLS 4 AND 5  
 HYDROGRAPH**



SCALE: N/A  
 MAY 2025

**FIGURE 6**

GIS: \\haleyaldrich.com\share\esa\_projects\notebooks\1792605\_Heglar\_Kronquist\_Compliance\_Monitoring\GIS\MG\2025056\_Heglar\_Kronquist\_Landfill.aprx - overrier - 5/12/2025 4:49 PM

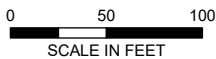


**LEGEND**

-  GAS VENT, WITH **MAXIMUM AMMONIA CONCENTRATION** IN PARTS PER MILLION (PPM)
-  SITE BOUNDARY

**NOTES**

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: NEARMAP, MAY 21, 2023

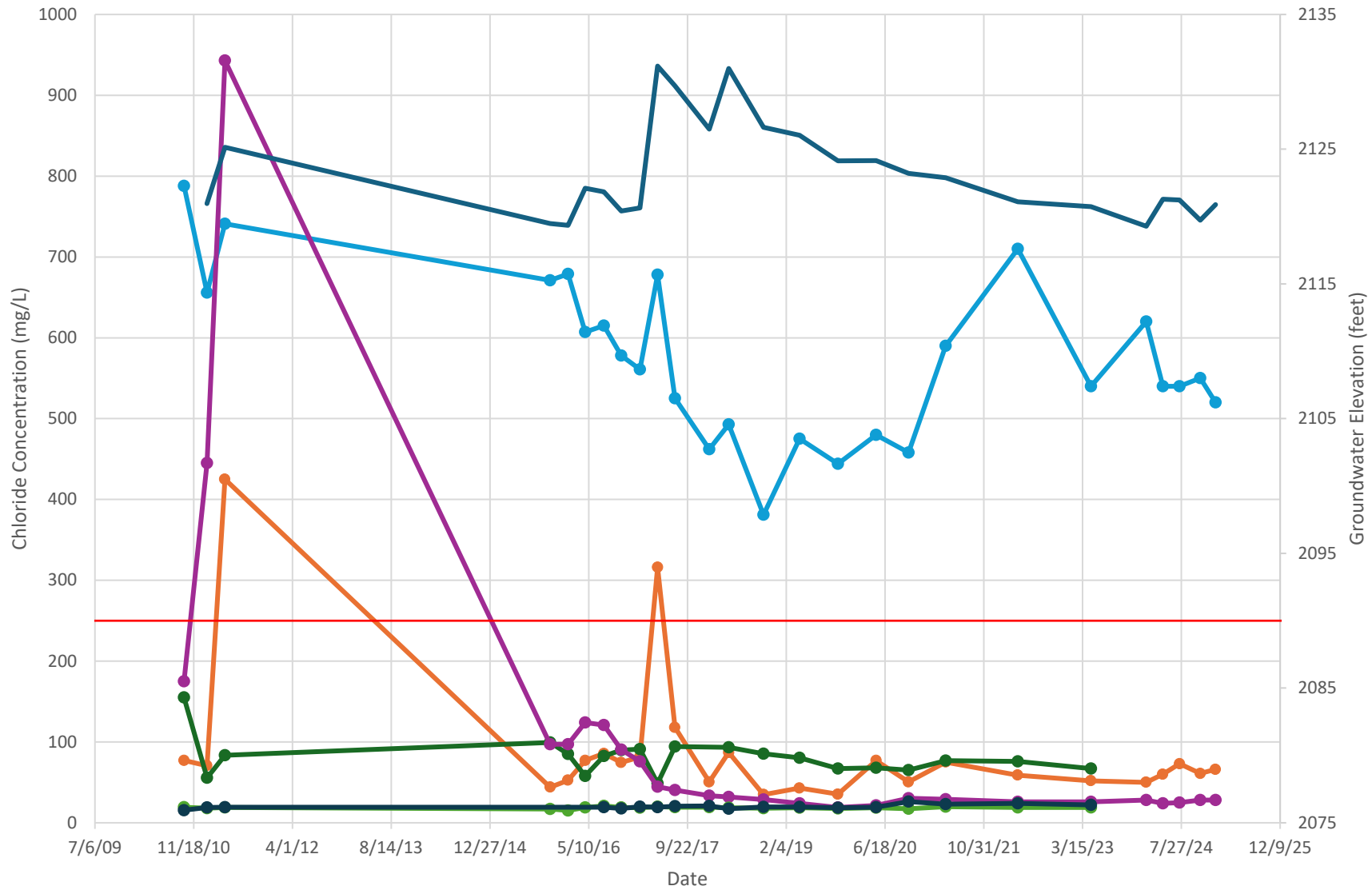


HEGLAR KRONQUIST SITE  
MEAD, WASHINGTON

**LANDFILL GAS VENT PLAN**

MAY 2025

**FIGURE 7**



**LEGEND**

- MW-1
- MW-2
- MW-3
- MW-4
- MW-5
- MW-6/-7
- Compliance Target
- GW Elevation MW-3

**NOTES**

Sampling discontinued at locations MW-2, -5, and -6/7 based on December 2023 Assessment Report.

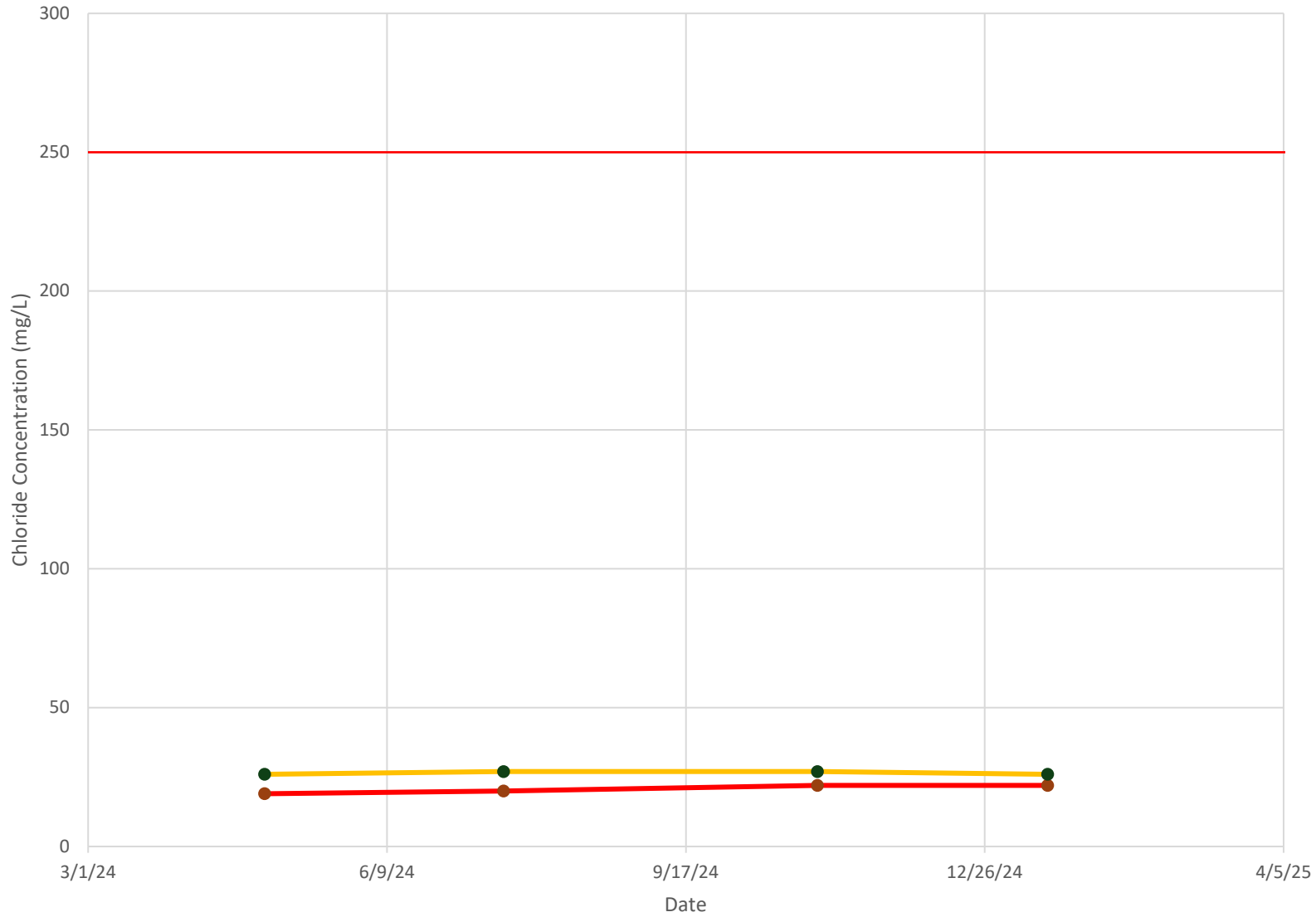


KAISER ALUMINUM INVESTMENTS COMPANY  
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 MEAD, WASHINGTON

**GROUNDWATER CHLORIDE CONCENTRATIONS VERSUS TIME**

SCALE: N/A  
 MAY 2025

**FIGURE 8**



**LEGEND**

**NOTES**

Sampling discontinued at locations MW-2, -5, and -6/7 based on December 2023 Assessment Report.

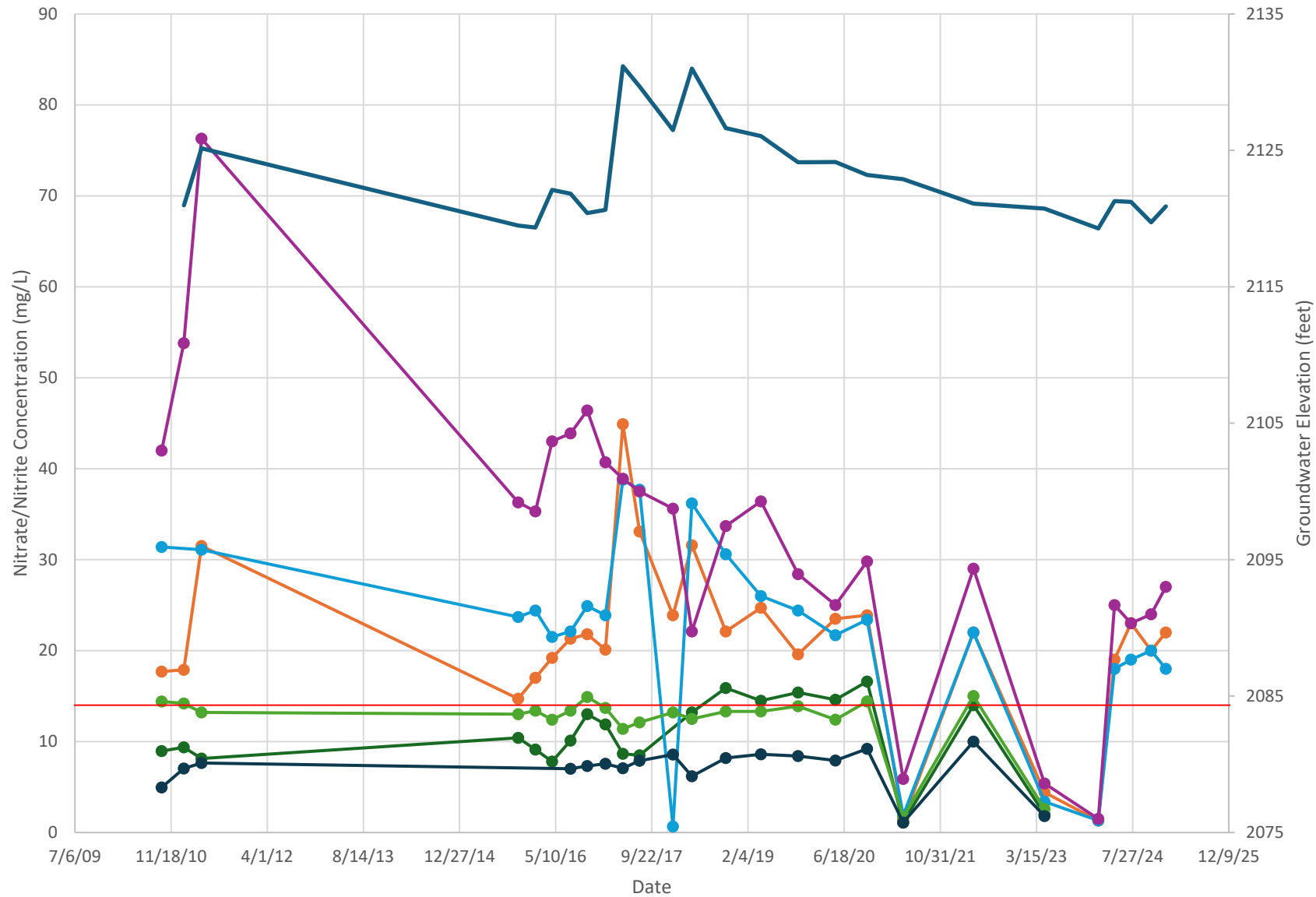


KAISER ALUMINUM INVESTMENTS COMPANY  
 HEGLAR KRONQUIST COMPLIANCE MONITORING  
 MEAD, WASHINGTON

**BACKGROUND GROUNDWATER  
 CHLORIDE VERSUS TIME**

SCALE: N/A  
 MAY 2025

**FIGURE 9**



**LEGEND**

**NOTES**

Sampling discontinued at locations MW-2, -5, and -6/7 based on December 2023 Assessment Report.

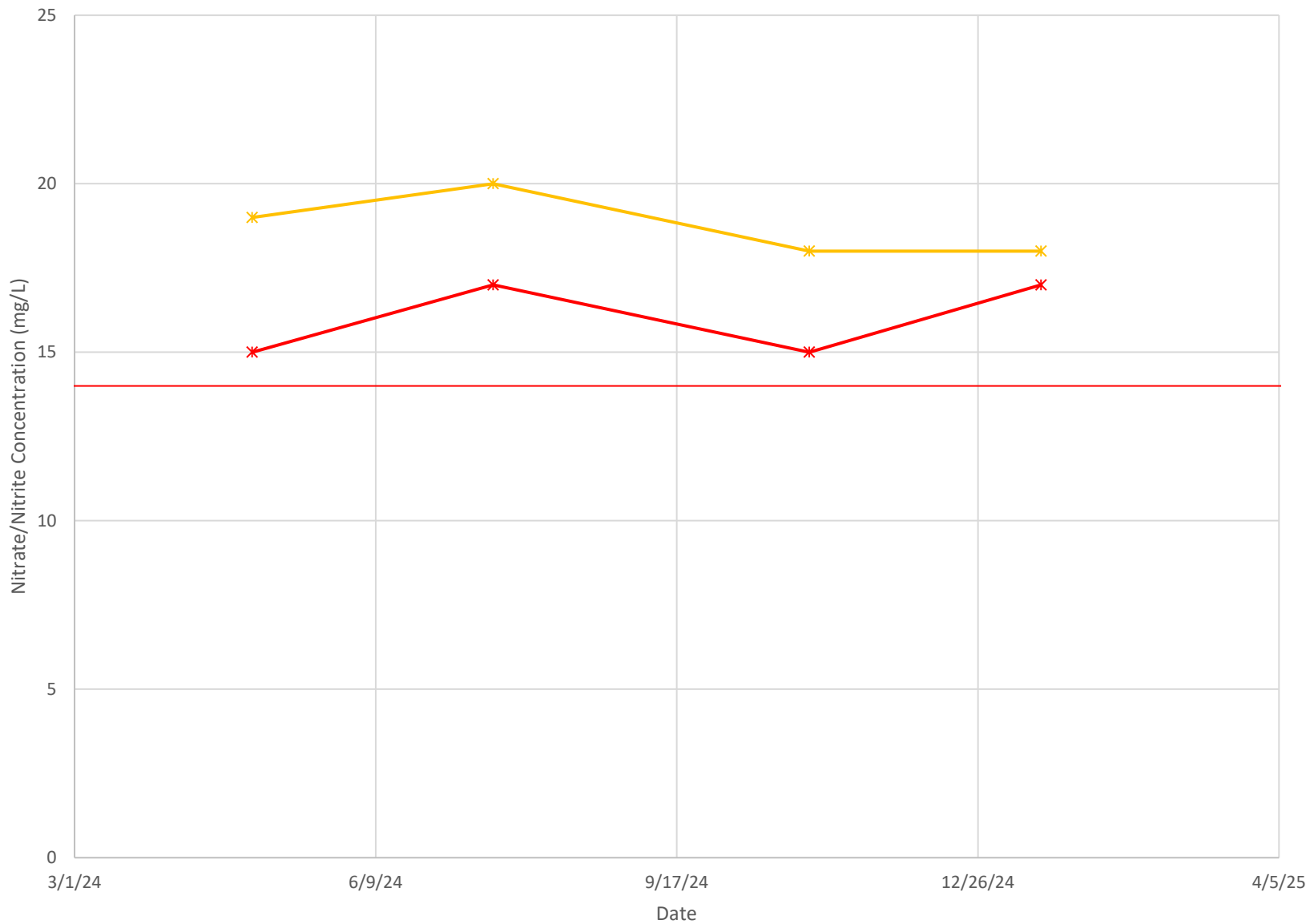


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 HEGLAR KRONQUIST COMPLIANCE MONITORING  
 MEAD, WASHINGTON

**GROUNDWATER NITRATE/NITRITE CONCENTRATIONS VERSUS TIME**

SCALE: N/A  
 MAY 2025

**FIGURE 10**



**LEGEND**

—\* DW-1     
 —\* DW-2     
 — Compliance Target

**NOTES**

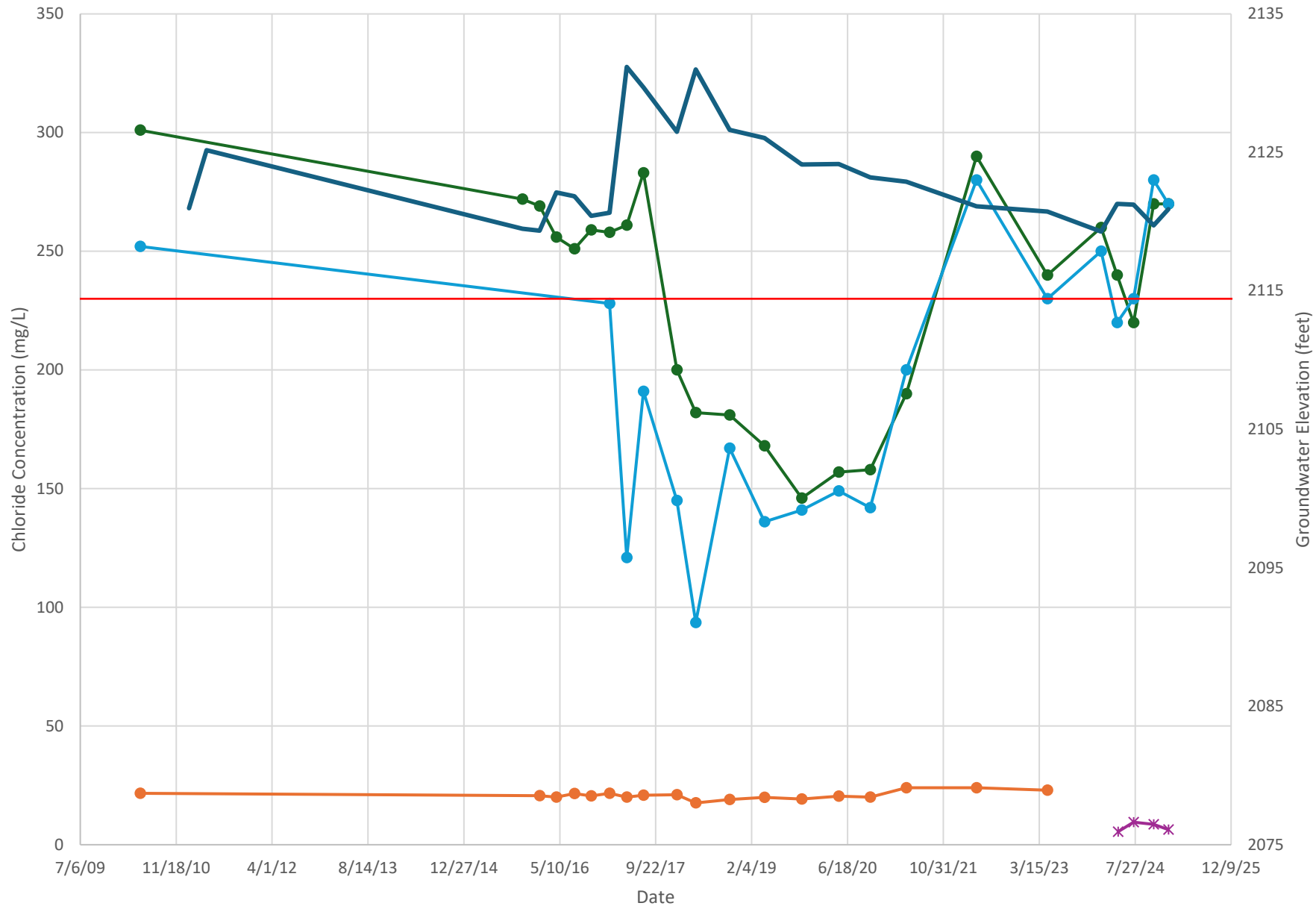
Sampling discontinued at locations MW-2, -5, and -6/7 based on December 2023 Assessment Report.

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 HEGLAR KRONQUIST COMPLIANCE MONITORING  
 MEAD, WASHINGTON

**BACKGROUND GROUNDWATER  
NITRATE/NITRITE VERSUS TIME**

SCALE: N/A  
MAY 2025

**FIGURE 11**



**LEGEND**

**NOTES**

Sampling discontinued at SW-1 location based on December 2023 Assessment Report.

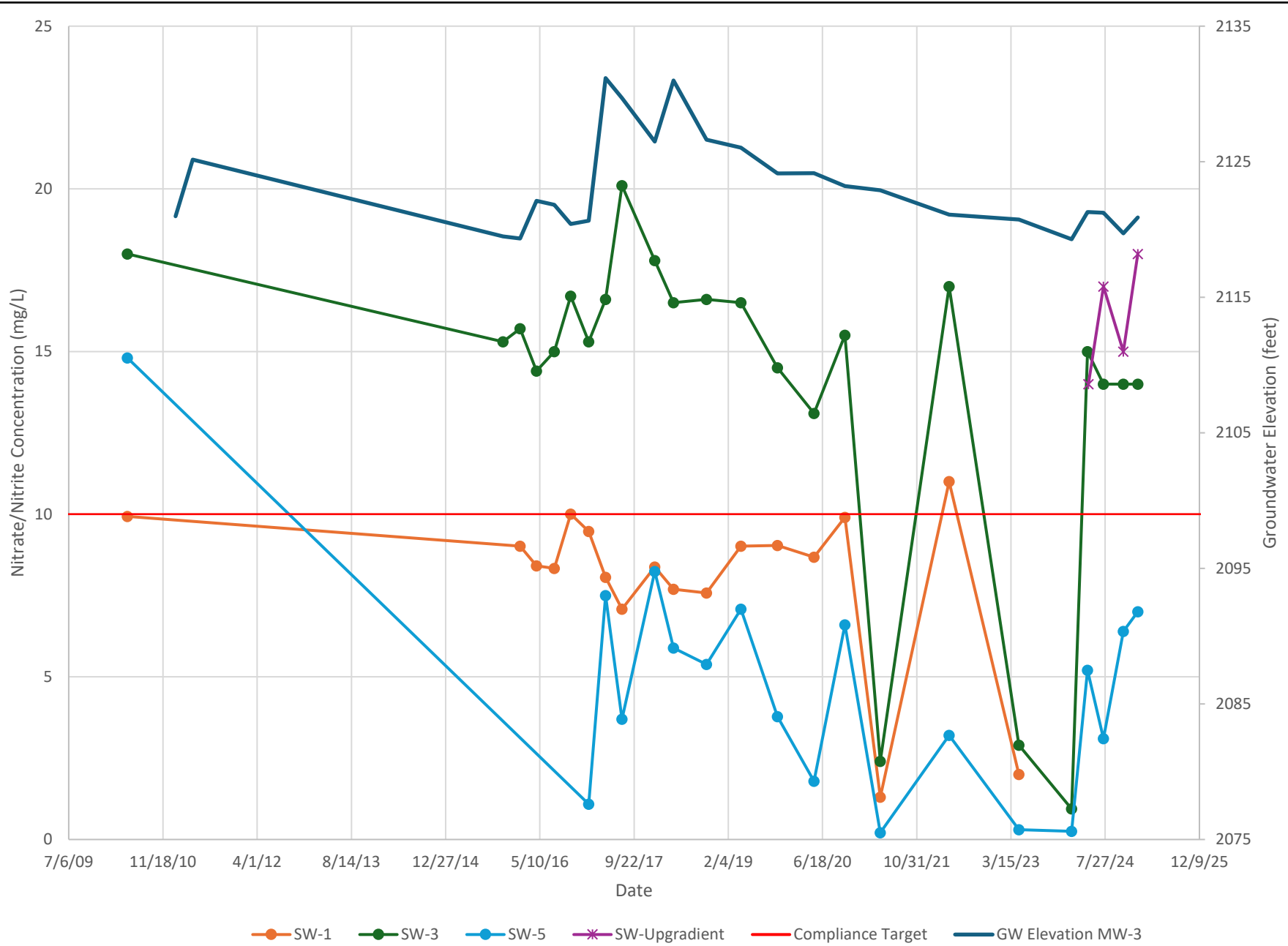


KAISER ALUMINUM INVESTMENTS COMPANY  
HEGLAR KRONQUIST COMPLIANCE MONITORING  
MEAD, WASHINGTON

**SURFACE WATER CHLORIDE CONCENTRATIONS VERSUS TIME**

SCALE: N/A  
MAY 2025

**FIGURE 12**



**LEGEND**

**NOTES**

Sampling discontinued at SW-1 location based on December 2023 Assessment Report.

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 HEGLAR KRONQUIST COMPLIANCE MONITORING  
 MEAD, WASHINGTON

**SURFACE WATER NITRATE/NITRITE CONCENTRATIONS VERSUS TIME**

SCALE: N/A  
 MAY 2025

**FIGURE 13**

**APPENDIX A**  
**Data Usability Summary Report and**  
**Analytical Laboratory Report**

## Data Usability Summary Report

**Project Name: Heglar Dronquist Compliance Monitoring**

**Project Description: Groundwater Samples**

**Sample Dates: 16 January 2025 and 7 February 2025**

**Analytical Laboratory: Eurofins Spokane – Spokane, WA**

**Validation Performed by: Abigail Peters**

**Validation Reviewed by: Gabrielle Davis**

**Validation Date: 1 April 2025**

---

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

- 1. Sample Delivery Group Numbers 590-29048-1 and 590-29375-1**
  - 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 Inorganic 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 and listed below.

A subset of data was qualified as estimated due to low matrix spike/matrix spike duplicate (MS/MSD) recoveries. A summary of qualifications is provided in Section 1.9.

# 1. Sample Delivery Group Numbers 590-29048-1 and 590-29375-1

## 1.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG numbers:

- 590-29048-1, dated 3 February 2025; and
- 590-29375-1, dated 21 February 2025.

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
DW-1-011625	N	590-29048-1	01/16/2025	WG	A, B, C, D
SW-UPGRADIENT-011625	N	590-29048-2	01/16/2025	WG	A, B, C, D
MW-4-011625	N	590-29048-3	01/16/2025	WG	A, B, C, D
MW-400-011625	N	590-29048-4	01/16/2025	WG	A, B, C, D
MW-3-011625	N	590-29048-5	01/16/2025	WG	A, B, C, D
SW-3-011625	N	590-29048-6	01/16/2025	WG	A, B, C, D
SW-300-011625	N	590-29048-7	01/16/2025	WG	A, B, C, D
MW-1-011625	N	590-29048-8	01/16/2025	WG	A, B, C, D
SW-5-011625	N	590-29048-9	01/16/2025	WG	A, B, C, D
DW-2-020725	N	590-29375-1	02/07/2025	WG	A, B, C, D

Method Holding Times			
A.	E300.0	Chloride	28 days for liquid, unpreserved
B.	E353.2	Nitrogen, Nitrate-Nitrite	28 days for liquid, preserved 48 hours for liquid, unpreserved
C.	SM2540C	Total Dissolved Solids	7 days for liquid, unpreserved
D.	SW6010D	Sodium	180 days for liquid, preserved

## 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, with the following exception:

Method	Matrix	Holding Time	Preservation	Sample ID, Violation, Qualification
ALL	Water	Various	Cool to ≤ 6 degrees Celsius (°C).	The cooler containing all samples was received warm at 7.1°C. However, the cooler was delivered same day as sample collection and there is evidence chilling had begun. No additional qualification of the reported results is recommended.

### 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 1.1.](#) Compounds associated with the laboratory control samples/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 1.2.](#) The samples below were used for MS/MSD:

Lab Sample Number	Matrix Spike/Matrix Spike Duplicate Sample Client ID	Method(s)
590-29375-1	DW-2-020725	E300.0
590-29048-1	DW-1-011625	E353.2

The MS/MSD recoveries and the relative percent difference (RPD) between the MS and MSD results were within the specified limits, with the following exception:

Sample Type	Method	Parent Sample	Analyte	%R/RPD	Qualifier	Affected Samples
MS/MSD	E300.0	DW-2-020725	Chloride	78%/78%	J-/UJ	DW-2-020725

### 1.6 BLANK SAMPLE ANALYSIS

[Refer to Section E 1.3.](#) Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

## 1.7 DUPLICATE SAMPLE ANALYSIS

[Refer to Section E 1.4.](#) The following sample was used for laboratory duplicate analysis and the RPD was below 20 percent (or the absolute difference rule was satisfied if detects were less than 5 times the RL):

Lab Sample Number	Laboratory Duplicate Sample Client ID	Methods
590-29375-1	DW-2-020725	E300.0, SM2540C

No field duplicates were collected in this dataset.

## 1.8 PRECISION AND ACCURACY

[Refer to Section E 1.5.](#) Where required by the method, some measurement of analytical accuracy and precision was reported for each method with the site samples, with the following exception:

- No precision was reported for SW6010D.

## 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. The qualifiers applied to this dataset are summarized in the table below.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
DW-2-020725	Chloride	26	26 J-	MS/MSD %R low

## 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 1.1 Laboratory Control Samples
  - The LCS/LCSD analyses are used to assess the precision and accuracy of the analytical method independent of matrix interferences.
- E 1.2 Matrix Spike Samples
  - 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.
  - For inorganic methods, when a matrix spike recovery falls outside of the control limits and the sample result is less than four times the spike added, a post-digestion spike (PDS) is performed.
- E 1.3 Blank Sample Analysis
  - Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination.
- E 1.4 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 RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
- E 1.5 Precision and Accuracy
  - Precision measures the reproducibility of repetitive measurements. In a laboratory environment, this will be measured by determining the 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 %R of certain spiked compounds. This can be assessed using LCS, blank spike (BS), MS, and/or surrogate recoveries.

### 3. Glossary

\*Analyte names may be abbreviated for simplicity. Please reference the laboratory report for the full analyte name.

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:
 

– ng/kg	nanograms per kilogram	– ppbv/v	parts per billion volume/volume
– µg/L	micrograms per liter	– pCi/L	picocuries per liter
– µg/m <sup>3</sup>	micrograms per cubic meter	– pg/g	picograms per gram
– mg/kg	milligrams per kilogram	– pg/L	picograms per liter
– mg/L	milligrams per liter		
  
- Matrices:
 

– AA	Ambient Air	– SSV	Sub-slab Vapor
– GS	Soil Gas	– ST	Solid Waste
– GW/WG	Groundwater	– WQ	Water Quality control matrix
– IA	Indoor Air	– WS	Surface Water
– SE	Sediment	– WW	Waste Water
– SO	Soil		
  
- 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	MDL	Laboratory Method Detection Limit
%R	Percent Recovery	MS/MSD	Matrix Spike/Matrix Spike Duplicate
%RSD	Percent Relative Standard Deviation	NA	not applicable
%v/v	Percent volume by volume	ND	Non-Detect
2s	2 sigma	NFG	National Functional Guidelines
4,4-DDT	4 4-dichlorodiphenyltrichloroethane	NH <sub>3</sub>	Ammonia
Abs Diff	Absolute Difference	NYSDEC	New York State Department of Environmental Conservation
amu	atomic mass unit	PAH	Polycyclic Aromatic Hydrocarbon
BPJ	Best Professional Judgement	PCB	Polychlorinated Biphenyl
BS	Blank Spike	PDS	Post-Digestion Spike
CCB	Continuing Calibration Blank	PEM	Performance Evaluation Mixture
CCV	Continuing Calibration Verification	PFAS	Per- and Polyfluoroalkyl Substances
CCVL	Continuing Calibration Verification Low	PFBA	Perfluorbutanoic Acid
COC	Chain of Custody	PFD	Perfluorodecalin
COM	Combined Isotope Calculation	PFOA	Perfluorooctanoic Acid
Cr (VI)	Hexavalent Chromium	PFOS	Perfluorooctane sulfonate
CRI	Collision Reaction Interface	PFPeA	Perfluoropentanoic Acid
DoD	Department of Defense	QAPP	Quality Assurance Project Plan
DQO	data quality objective	QC	Quality Control
DUSR	Data Usability Summary Report	QSM	Quality Systems Manual
EIS	Extraction Internal Standard	R <sup>2</sup>	R-squared value
EMPC	Estimated Maximum Possible Concentration	Ra-226	Radium-226
FBK	Field Blank Contamination	Ra-228	Radium-228
FDP	Field Duplicate	RESC	Resolution Check Measure
GC	Gas Chromatograph	RL	Laboratory Reporting Limit
GC/MS	Gas Chromatography/Mass Spectrometry	RPD	Relative Percent Difference
GPC	Gel Permeation Chromatography	RRF	Relative Response Factor
H <sub>2</sub>	Hydrogen gas	RT	Retention Time
HCl	Hydrochloric Acid	SAP	Sampling Analysis Plan
ICAL	Initial Calibration	SDG	Sample Delivery Group
ICB	Initial Calibration Blank	SIM	Selected ion monitoring
ICP/MS	Inductively Coupled Plasma/Mass Spectrometry	SOP	Standard Operating Procedure
ICV	Initial Calibration Verification	SPE	Solid-Phase Extraction
ICVL	Initial Calibration Verification Low	SVOC	Semi-Volatile Organic Compound
IPA	Isopropyl Alcohol	TCLP	Toxicity Characteristic Leaching Procedure
LC	Laboratory Control	TIC	Tentatively Identified Compound
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate	TKN	Total Kjeldahl Nitrogen
MBK	Method Blank Contamination	TPH	Total Petroleum Hydrocarbon
MDC	Minimum Detectable Concentration	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 NFG 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, 2020. National Functional Guidelines for Inorganic Superfund Methods Data Review. EPA-542-R-20-006. November.

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Ward McDonald  
Haley & Aldrich, Inc.  
505 W Riverside Ave  
Suite 450  
Spokane, Washington 99201

Generated 2/3/2025 7:08:25 AM

**JOB DESCRIPTION**

Heglar Kronquist Compliance Monitoring

**JOB NUMBER**

590-29048-1

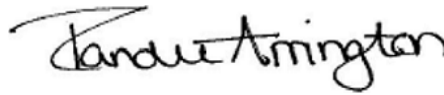
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## Job Notes

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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# Case Narrative

Client: Haley & Aldrich, Inc.  
Project: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

**Job ID: 590-29048-1**

**Eurofins Spokane**

## Job Narrative 590-29048-1

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 1/16/2025 4:32 PM. 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 1.3°C.

### HPLC/IC

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

### Metals

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

### General Chemistry

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

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# Sample Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-29048-1	DW-1	Water	01/16/25 11:36	01/16/25 16:32
590-29048-2	SW-Upgradient	Water	01/16/25 11:50	01/16/25 16:32
590-29048-3	MW-4	Water	01/16/25 09:45	01/16/25 16:32
590-29048-4	MW-400	Water	01/16/25 09:55	01/16/25 16:32
590-29048-5	MW-3	Water	01/16/25 13:30	01/16/25 16:32
590-29048-6	SW-3	Water	01/16/25 12:40	01/16/25 16:32
590-29048-7	SW-300	Water	01/16/25 12:50	01/16/25 16:32
590-29048-8	MW-1	Water	01/16/25 14:45	01/16/25 16:32
590-29048-9	SW-5	Water	01/16/25 15:25	01/16/25 16:32

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## Definitions/Glossary

Client: Haley & Aldrich, Inc.  
Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

### 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 Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

## Client Sample ID: DW-1

Lab Sample ID: 590-29048-1

Date Collected: 01/16/25 11:36

Matrix: Water

Date Received: 01/16/25 16:32

### Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		0.80		mg/L			01/21/25 12:16	1

### Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	36		2.0		mg/L		01/29/25 14:10	01/29/25 18:15	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 353.2)	17		4.0		mg/L			01/31/25 15:45	20
Total Dissolved Solids (SM 2540C)	450		25		mg/L			01/22/25 16:31	1

## Client Sample ID: SW-Upgradient

Lab Sample ID: 590-29048-2

Date Collected: 01/16/25 11:50

Matrix: Water

Date Received: 01/16/25 16:32

### Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.4		0.80		mg/L			01/21/25 12:26	1

### Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	16		2.0		mg/L		01/27/25 10:29	01/27/25 17:23	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 353.2)	18		4.0		mg/L			01/31/25 15:49	20
Total Dissolved Solids (SM 2540C)	320		25		mg/L			01/22/25 16:31	1

## Client Sample ID: MW-4

Lab Sample ID: 590-29048-3

Date Collected: 01/16/25 09:45

Matrix: Water

Date Received: 01/16/25 16:32

### Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28		0.80		mg/L			01/21/25 12:36	1

### Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	50		2.0		mg/L		01/29/25 14:10	01/29/25 18:25	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 353.2)	27		4.0		mg/L			01/31/25 15:50	20
Total Dissolved Solids (SM 2540C)	420		25		mg/L			01/22/25 16:31	1

## Client Sample ID: MW-400

Lab Sample ID: 590-29048-4

Date Collected: 01/16/25 09:55

Matrix: Water

Date Received: 01/16/25 16:32

### Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28		0.80		mg/L			01/21/25 12:46	1

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# Client Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

## Client Sample ID: MW-400

Lab Sample ID: 590-29048-4

Date Collected: 01/16/25 09:55

Matrix: Water

Date Received: 01/16/25 16:32

### Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	49		2.0		mg/L		01/29/25 14:10	01/29/25 18:30	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 353.2)	27		4.0		mg/L			01/31/25 15:51	20
Total Dissolved Solids (SM 2540C)	440		25		mg/L			01/22/25 16:31	1

## Client Sample ID: MW-3

Lab Sample ID: 590-29048-5

Date Collected: 01/16/25 13:30

Matrix: Water

Date Received: 01/16/25 16:32

### Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	520		8.0		mg/L			01/22/25 13:53	10

### Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	200		2.0		mg/L		01/29/25 14:10	01/29/25 18:35	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 353.2)	18		4.0		mg/L			01/31/25 15:52	20
Total Dissolved Solids (SM 2540C)	950		25		mg/L			01/22/25 16:31	1

## Client Sample ID: SW-3

Lab Sample ID: 590-29048-6

Date Collected: 01/16/25 12:40

Matrix: Water

Date Received: 01/16/25 16:32

### Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	270		8.0		mg/L			01/22/25 14:03	10

### Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	96		2.0		mg/L		01/27/25 10:29	01/27/25 17:28	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 353.2)	14		1.0		mg/L			01/28/25 16:48	5
Total Dissolved Solids (SM 2540C)	650		25		mg/L			01/22/25 16:31	1

## Client Sample ID: SW-300

Lab Sample ID: 590-29048-7

Date Collected: 01/16/25 12:50

Matrix: Water

Date Received: 01/16/25 16:32

### Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	270		8.0		mg/L			01/22/25 14:13	10

### Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	97		2.0		mg/L		01/27/25 10:29	01/27/25 17:33	1

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# Client Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

**Client Sample ID: SW-300**

**Lab Sample ID: 590-29048-7**

Date Collected: 01/16/25 12:50

Matrix: Water

Date Received: 01/16/25 16:32

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 353.2)	16		4.0		mg/L			01/31/25 15:54	20
Total Dissolved Solids (SM 2540C)	680		25		mg/L			01/22/25 16:31	1

**Client Sample ID: MW-1**

**Lab Sample ID: 590-29048-8**

Date Collected: 01/16/25 14:45

Matrix: Water

Date Received: 01/16/25 16:32

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	66		0.80		mg/L			01/21/25 13:46	1

**Method: SW846 6010D - Metals (ICP) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	71		2.0		mg/L		01/29/25 14:10	01/29/25 18:50	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 353.2)	22		4.0		mg/L			01/31/25 15:55	20
Total Dissolved Solids (SM 2540C)	430		25		mg/L			01/22/25 16:31	1

**Client Sample ID: SW-5**

**Lab Sample ID: 590-29048-9**

Date Collected: 01/16/25 15:25

Matrix: Water

Date Received: 01/16/25 16:32

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	270		8.0		mg/L			01/22/25 14:23	10

**Method: SW846 6010D - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	93		2.0		mg/L		01/27/25 10:29	01/27/25 17:38	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 353.2)	7.0		2.0		mg/L			01/31/25 15:56	10
Total Dissolved Solids (SM 2540C)	630		25		mg/L			01/22/25 16:31	1

# QC Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 590-51911/1003**  
**Matrix: Water**  
**Analysis Batch: 51911**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80		mg/L			01/21/25 08:34	1

**Lab Sample ID: LCS 590-51911/1005**  
**Matrix: Water**  
**Analysis Batch: 51911**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	12.5	12.6		mg/L		101	90 - 110

**Lab Sample ID: MB 590-51937/1003**  
**Matrix: Water**  
**Analysis Batch: 51937**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80		mg/L			01/22/25 09:55	1

**Lab Sample ID: LCS 590-51937/1004**  
**Matrix: Water**  
**Analysis Batch: 51937**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	12.5	12.7		mg/L		101	90 - 110

## Method: 6010D - Metals (ICP)

**Lab Sample ID: MB 590-51994/2-A**  
**Matrix: Water**  
**Analysis Batch: 52009**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 51994**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	ND		2.0		mg/L		01/27/25 10:26	01/27/25 12:09	1

**Lab Sample ID: LCS 590-51994/1-A**  
**Matrix: Water**  
**Analysis Batch: 52009**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 51994**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sodium	50.0	45.1		mg/L		90	80 - 154

**Lab Sample ID: MB 590-52064/2-B**  
**Matrix: Water**  
**Analysis Batch: 52067**

**Client Sample ID: Method Blank**  
**Prep Type: Dissolved**  
**Prep Batch: 52065**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	ND		2.0		mg/L		01/29/25 14:10	01/29/25 17:05	1

# QC Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

## Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 590-52064/1-B  
 Matrix: Water  
 Analysis Batch: 52067

Client Sample ID: Lab Control Sample  
 Prep Type: Dissolved  
 Prep Batch: 52065

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sodium	50.0	49.2		mg/L		98	80 - 154

## Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-682926/21  
 Matrix: Water  
 Analysis Batch: 682926

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.20		mg/L			01/28/25 16:35	1

Lab Sample ID: LCS 280-682926/19  
 Matrix: Water  
 Analysis Batch: 682926

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.00	0.997		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-682926/20  
 Matrix: Water  
 Analysis Batch: 682926

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	1.00	0.999		mg/L		100	90 - 110	0	10

Lab Sample ID: MB 280-683337/20  
 Matrix: Water  
 Analysis Batch: 683337

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.20		mg/L			01/31/25 15:44	1

Lab Sample ID: LCS 280-683337/18  
 Matrix: Water  
 Analysis Batch: 683337

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.00	1.01		mg/L		101	90 - 110

Lab Sample ID: LCSD 280-683337/19  
 Matrix: Water  
 Analysis Batch: 683337

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	1.00	1.02		mg/L		102	90 - 110	1	10

# QC Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

## Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

**Lab Sample ID: 590-29048-1 MS**  
**Matrix: Water**  
**Analysis Batch: 683337**

**Client Sample ID: DW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	17		40.0	57.9		mg/L		103	90 - 110

**Lab Sample ID: 590-29048-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 683337**

**Client Sample ID: DW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	17		40.0	58.1		mg/L		104	90 - 110	0	10

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 590-51955/1**  
**Matrix: Water**  
**Analysis Batch: 51955**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		25		mg/L			01/22/25 16:31	1

**Lab Sample ID: LCS 590-51955/2**  
**Matrix: Water**  
**Analysis Batch: 51955**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	500	501		mg/L		100	80 - 120

# Lab Chronicle

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

## Client Sample ID: DW-1

Lab Sample ID: 590-29048-1

Date Collected: 01/16/25 11:36

Matrix: Water

Date Received: 01/16/25 16:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	5 mL	5 mL	51911	01/21/25 12:16	NMI	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	52065	01/29/25 14:10	AMB	EET SPK
Dissolved	Analysis	6010D		1			52067	01/29/25 18:15	AMB	EET SPK
Total/NA	Analysis	353.2		20	100 mL	100 mL	683337	01/31/25 15:45	MF	EET DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	51955	01/22/25 16:31	RMA	EET SPK

## Client Sample ID: SW-Upgradient

Lab Sample ID: 590-29048-2

Date Collected: 01/16/25 11:50

Matrix: Water

Date Received: 01/16/25 16:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	5 mL	5 mL	51911	01/21/25 12:26	NMI	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	51994	01/27/25 10:29	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			52029	01/27/25 17:23	AMB	EET SPK
Total/NA	Analysis	353.2		20	100 mL	100 mL	683337	01/31/25 15:49	MF	EET DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	51955	01/22/25 16:31	RMA	EET SPK

## Client Sample ID: MW-4

Lab Sample ID: 590-29048-3

Date Collected: 01/16/25 09:45

Matrix: Water

Date Received: 01/16/25 16:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	5 mL	5 mL	51911	01/21/25 12:36	NMI	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	52065	01/29/25 14:10	AMB	EET SPK
Dissolved	Analysis	6010D		1			52067	01/29/25 18:25	AMB	EET SPK
Total/NA	Analysis	353.2		20	100 mL	100 mL	683337	01/31/25 15:50	MF	EET DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	51955	01/22/25 16:31	RMA	EET SPK

## Client Sample ID: MW-400

Lab Sample ID: 590-29048-4

Date Collected: 01/16/25 09:55

Matrix: Water

Date Received: 01/16/25 16:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	5 mL	5 mL	51911	01/21/25 12:46	NMI	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	52065	01/29/25 14:10	AMB	EET SPK
Dissolved	Analysis	6010D		1			52067	01/29/25 18:30	AMB	EET SPK
Total/NA	Analysis	353.2		20	100 mL	100 mL	683337	01/31/25 15:51	MF	EET DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	51955	01/22/25 16:31	RMA	EET SPK

# Lab Chronicle

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

**Client Sample ID: MW-3**

**Lab Sample ID: 590-29048-5**

Date Collected: 01/16/25 13:30

Matrix: Water

Date Received: 01/16/25 16:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	5 mL	5 mL	51937	01/22/25 13:53	NMI	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	52065	01/29/25 14:10	AMB	EET SPK
Dissolved	Analysis	6010D		1			52067	01/29/25 18:35	AMB	EET SPK
Total/NA	Analysis	353.2		20	100 mL	100 mL	683337	01/31/25 15:52	MF	EET DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	51955	01/22/25 16:31	RMA	EET SPK

**Client Sample ID: SW-3**

**Lab Sample ID: 590-29048-6**

Date Collected: 01/16/25 12:40

Matrix: Water

Date Received: 01/16/25 16:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	5 mL	5 mL	51937	01/22/25 14:03	NMI	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	51994	01/27/25 10:29	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			52029	01/27/25 17:28	AMB	EET SPK
Total/NA	Analysis	353.2		5	100 mL	100 mL	682926	01/28/25 16:48	AKF	EET DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	51955	01/22/25 16:31	RMA	EET SPK

**Client Sample ID: SW-300**

**Lab Sample ID: 590-29048-7**

Date Collected: 01/16/25 12:50

Matrix: Water

Date Received: 01/16/25 16:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	5 mL	5 mL	51937	01/22/25 14:13	NMI	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	51994	01/27/25 10:29	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			52029	01/27/25 17:33	AMB	EET SPK
Total/NA	Analysis	353.2		20	100 mL	100 mL	683337	01/31/25 15:54	MF	EET DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	51955	01/22/25 16:31	RMA	EET SPK

**Client Sample ID: MW-1**

**Lab Sample ID: 590-29048-8**

Date Collected: 01/16/25 14:45

Matrix: Water

Date Received: 01/16/25 16:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	5 mL	5 mL	51911	01/21/25 13:46	NMI	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	52065	01/29/25 14:10	AMB	EET SPK
Dissolved	Analysis	6010D		1			52067	01/29/25 18:50	AMB	EET SPK
Total/NA	Analysis	353.2		20	100 mL	100 mL	683337	01/31/25 15:55	MF	EET DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	51955	01/22/25 16:31	RMA	EET SPK

# Lab Chronicle

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

**Client Sample ID: SW-5**

**Lab Sample ID: 590-29048-9**

**Date Collected: 01/16/25 15:25**

**Matrix: Water**

**Date Received: 01/16/25 16:32**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	5 mL	5 mL	51937	01/22/25 14:23	NMI	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	51994	01/27/25 10:29	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			52029	01/27/25 17:38	AMB	EET SPK
Total/NA	Analysis	353.2		10	100 mL	100 mL	683337	01/31/25 15:56	MF	EET DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	51955	01/22/25 16:31	RMA	EET SPK

**Laboratory References:**

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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



# Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

## Laboratory: Eurofins Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-06-26
The laboratory is provisionally certified for the analyte(s) listed below:			
<u>Analysis Method</u>	<u>Prep Method</u>	<u>Matrix</u>	<u>Analyte</u>
SM 2540C		Water	Total Dissolved Solids

## Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-26
A2LA	ISO/IEC 17025	2907.01	10-31-26
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	11-30-25
Arizona	State	AZ0713	12-20-25
Arkansas DEQ	State	19-047-0	04-21-25
California	State	2513	01-08-25 *
Colorado	Petroleum Storage Tank Program	2907.01 (A2LA)	10-31-26
Colorado	State	CO00026	06-30-25
Connecticut	State	PH-0686	09-30-26
Florida	NELAP	E87667	06-30-25
Georgia	State	4025	01-08-26
Illinois	NELAP	200017	05-31-25
Iowa	State	370	12-01-26
Kansas	NELAP	E-10166	04-30-25
Kentucky (WW)	State	KY98047	12-31-25
Louisiana	NELAP	30785	06-30-14 *
Louisiana (All)	NELAP	30785	06-30-25
Minnesota	NELAP	1788752	12-31-25
Nevada	State	CO00026	07-31-25
New Hampshire	NELAP	2053	04-28-25
New Jersey	NELAP	230001	06-30-25
New York	NELAP	59923	04-01-25
North Dakota	State	R-034	01-08-25 *
Oklahoma	NELAP	8614	08-31-25
Oregon	NELAP	4025	01-08-26
Pennsylvania	NELAP	013	07-31-25
South Carolina	State	72002001	01-18-25 *
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183	09-30-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO00026	07-31-25
Virginia	NELAP	460232	06-14-25
Washington	State	C583	08-03-25
West Virginia DEP	State	354	11-30-25
Wisconsin	State	999615430	08-31-25
Wyoming (UST)	A2LA	2907.01	10-31-26

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Method Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Heglar Kronquist Compliance Monitoring

Job ID: 590-29048-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET SPK
6010D	Metals (ICP)	SW846	EET SPK
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET SPK
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SPK

**Protocol References:**

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

**Laboratory References:**

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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







**Eurofins Spokane**  
 11922 East 1st Ave  
 Spokane, WA 99206  
 Phone: 509-924-9200 Fax: 509-924-9290

**Chain of Custody Record**



**eurofins** | Environment Testing

**Client Information (Sub Contract Lab)**

Client Contact: **Arrington, Randee E** Lab P#: **Arrington, Randee E** Carrier Tracking No(s): **N/A** COC No: **590-10409.1**

Shipping/Receiving: **N/A** Phone: **N/A** E-Mail: **Randee.Arrington@eurofins.com** State of Origin: **Washington** Page: **1 of 1**

Company: **Eurofins Environment Testing Northwest** Accreditation Required (See note): **State Program - Washington** Job #: **590-29048-1**

Address: **5765 8th Street East** Due Date Requested: **2/3/2025** Preservation Codes: **590-29048-1**

City: **Tacoma** TAT Requested (days): **N/A** Analysis Requested

State/Zip: **WA, 98424** PO #: **N/A**

Phone: **253-922-2310(Tel)** MO #: **N/A**

Email: **N/A** Project #: **59001939**

Project Name: **Heglar Kronquist Compliance Monitoring**

Site: **N/A** SSOV#: **N/A**

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (G=Comp, G=grab)	Matrix (Water, Solid, Organic, Aqueous)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note:
DW-1 (590-29048-1)	1/16/25	11:36 Pacific	G	Water		X	1	
SW-Upgrade (590-29048-2)	1/16/25	11:50 Pacific	G	Water		X	1	
MMW-4 (590-29048-3)	1/16/25	09:45 Pacific	G	Water		X	1	
MMW-400 (590-29048-4)	1/16/25	09:55 Pacific	G	Water		X	1	
MMW-3 (590-29048-5)	1/16/25	13:30 Pacific	G	Water		X	1	
SW-3 (590-29048-6)	1/16/25	12:40 Pacific	G	Water		X	1	
SW-300 (590-29048-7)	1/16/25	12:50 Pacific	G	Water		X	1	
MMW-1 (590-29048-8)	1/16/25	14:45 Pacific	G	Water		X	1	
SW-5 (590-29048-9)	1/16/25	15:25 Pacific	G	Water		X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/shipment, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.

**Possible Hazard Identification**

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) **Primary Deliverable Rank: 2**

Empty Kit Relinquished by: **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_ **Method of Shipment:** \_\_\_\_\_

Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QCC Requirements:

Relinquished by: **Date/Time:** **1/20/25 1446** **Company:** **BESTSB** **Received by:** **Date/Time:** **1/21/25 0923** **Company:** **ETT**

Relinquished by: **Date/Time:** \_\_\_\_\_ **Company:** \_\_\_\_\_ **Received by:** \_\_\_\_\_ **Date/Time:** \_\_\_\_\_ **Company:** \_\_\_\_\_

Custody Seals Intact: **Δ Yes Δ No** Custody Seal No.: \_\_\_\_\_ **Cooler Temperature(s) °C and Other Remarks:** **Well - 1.3 / -0.3**

## Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 590-29048-1

**Login Number: 29048**

**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	

## Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 590-29048-1

**Login Number: 29048**

**List Number: 3**

**Creator: Little, Matthew L**

**List Source: Eurofins Denver**

**List Creation: 01/25/25 01:54 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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?	N/A	
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	



## Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 590-29048-1

**Login Number: 29048**

**List Number: 4**

**Creator: Little, Matthew L**

**List Source: Eurofins Denver**

**List Creation: 01/30/25 12:48 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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?	N/A	
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	



 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Ward McDonald  
Haley & Aldrich, Inc.  
505 W Riverside Ave  
Suite 450  
Spokane, Washington 99201

Generated 2/21/2025 1:08:37 PM

**JOB DESCRIPTION**

Heglar Dronquist Compliance Monitoring/0202548-004

**JOB NUMBER**

590-29375-1

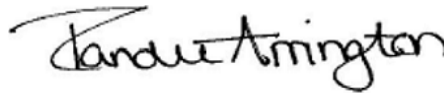
# Eurofins Spokane

## 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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2/21/2025 1:08:37 PM

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



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# Case Narrative

Client: Haley & Aldrich, Inc.  
Project: Heglar Dronquist Compliance Monitoring/0202548-004

Job ID: 590-29375-1

**Job ID: 590-29375-1**

**Eurofins Spokane**

## Job Narrative 590-29375-1

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 sample was received on 2/7/2025 3:28 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 7.1°C.

### HPLC/IC

Method 300\_ORGFM\_28D: Due to the high concentration of Chloride, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 590-52257 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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

### Metals

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

### General Chemistry

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

Eurofins Spokane

# Sample Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Heglar Dronquist Compliance  
Monitoring/0202548-004

Job ID: 590-29375-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-29375-1	DW-2	Water	02/07/25 14:05	02/07/25 15:28

1

2

3

4

5

6

7

8

9

10

11

12

# Definitions/Glossary

Client: Haley & Aldrich, Inc.  
Project/Site: Heglar Dronquist Compliance  
Monitoring/0202548-004

Job ID: 590-29375-1

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

## 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 Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Dronquist Compliance  
 Monitoring/0202548-004

Job ID: 590-29375-1

**Client Sample ID: DW-2**

**Lab Sample ID: 590-29375-1**

Date Collected: 02/07/25 14:05

Matrix: Water

Date Received: 02/07/25 15:28

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26	F1	0.80		mg/L			02/10/25 18:13	1

**Method: SW846 6010D - Metals (ICP) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	29		2.0		mg/L		02/11/25 17:46	02/17/25 16:32	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N (EPA 353.2)	18		2.0		mg/L			02/12/25 15:53	10
Total Dissolved Solids (SM 2540C)	470		25		mg/L			02/14/25 11:41	1



# QC Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Dronquist Compliance  
 Monitoring/0202548-004

Job ID: 590-29375-1

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-52257/1014  
 Matrix: Water  
 Analysis Batch: 52257

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80		mg/L			02/10/25 17:53	1

Lab Sample ID: LCS 590-52257/1015  
 Matrix: Water  
 Analysis Batch: 52257

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	12.5	11.9		mg/L		95	90 - 110

Lab Sample ID: 590-29375-1 MS  
 Matrix: Water  
 Analysis Batch: 52257

Client Sample ID: DW-2  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	26	F1	11.4	35.2	F1	mg/L		78	80 - 120

Lab Sample ID: 590-29375-1 MSD  
 Matrix: Water  
 Analysis Batch: 52257

Client Sample ID: DW-2  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	26	F1	11.4	35.2	F1	mg/L		78	80 - 120	0	10

Lab Sample ID: 590-29375-1 DU  
 Matrix: Water  
 Analysis Batch: 52257

Client Sample ID: DW-2  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	26	F1		26.4		mg/L		0.3	18.8

## Method: 6010D - Metals (ICP)

Lab Sample ID: MB 590-52294/2-A  
 Matrix: Water  
 Analysis Batch: 52410

Client Sample ID: Method Blank  
 Prep Type: Total Recoverable  
 Prep Batch: 52294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	ND		2.0		mg/L		02/11/25 17:45	02/17/25 14:11	1

Lab Sample ID: LCS 590-52294/1-A  
 Matrix: Water  
 Analysis Batch: 52410

Client Sample ID: Lab Control Sample  
 Prep Type: Total Recoverable  
 Prep Batch: 52294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sodium	50.0	47.6		mg/L		95	80 - 154

# QC Sample Results

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Dronquist Compliance  
 Monitoring/0202548-004

Job ID: 590-29375-1

## Method: 353.2 - Nitrogen, Nitrate-Nitrite

**Lab Sample ID: MB 280-684559/59**  
**Matrix: Water**  
**Analysis Batch: 684559**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.20		mg/L			02/12/25 15:17	1

**Lab Sample ID: LCS 280-684559/57**  
**Matrix: Water**  
**Analysis Batch: 684559**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.00	0.995		mg/L		100	90 - 110

**Lab Sample ID: LCSD 280-684559/58**  
**Matrix: Water**  
**Analysis Batch: 684559**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	1.00	0.990		mg/L		99	90 - 110	1	10

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 590-52374/1**  
**Matrix: Water**  
**Analysis Batch: 52374**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		25		mg/L			02/14/25 11:40	1

**Lab Sample ID: LCS 590-52374/2**  
**Matrix: Water**  
**Analysis Batch: 52374**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	500	496		mg/L		99	80 - 120

**Lab Sample ID: 590-29375-1 DU**  
**Matrix: Water**  
**Analysis Batch: 52374**

**Client Sample ID: DW-2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	470		458		mg/L		3	10

# Lab Chronicle

Client: Haley & Aldrich, Inc.  
Project/Site: Heglar Dronquist Compliance  
Monitoring/0202548-004

Job ID: 590-29375-1

**Client Sample ID: DW-2**

**Lab Sample ID: 590-29375-1**

**Date Collected: 02/07/25 14:05**

**Matrix: Water**

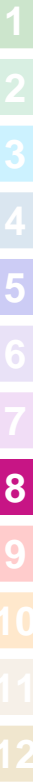
**Date Received: 02/07/25 15:28**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	5 mL	5 mL	52257	02/10/25 18:13	NMI	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	52294	02/11/25 17:46	AMB	EET SPK
Dissolved	Analysis	6010D		1			52410	02/17/25 16:32	AMB	EET SPK
Total/NA	Analysis	353.2		10	100 mL	100 mL	684559	02/12/25 15:53	BCR	EET DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	52374	02/14/25 11:41	RMA	EET SPK

**Laboratory References:**

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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



# Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.  
 Project/Site: Heglar Dronquist Compliance  
 Monitoring/0202548-004

Job ID: 590-29375-1

## Laboratory: Eurofins Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-06-26
The laboratory is provisionally certified for the analyte(s) listed below:			
<u>Analysis Method</u>	<u>Prep Method</u>	<u>Matrix</u>	<u>Analyte</u>
SM 2540C		Water	Total Dissolved Solids

## Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-26
A2LA	ISO/IEC 17025	2907.01	10-31-26
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	11-30-25
Arizona	State	AZ0713	12-20-25
Arkansas DEQ	State	19-047-0	04-21-25
California	State	2513	02-13-25
Colorado	Petroleum Storage Tank Program	2907.01 (A2LA)	10-31-26
Colorado	State	CO00026	06-30-25
Connecticut	State	PH-0686	09-30-26
Florida	NELAP	E87667	06-30-25
Georgia	State	4025	01-08-26
Illinois	NELAP	200017	05-31-25
Iowa	State	370	12-01-26
Kansas	NELAP	E-10166	04-30-25
Kentucky (WW)	State	KY98047	12-31-25
Louisiana	NELAP	30785	06-30-14 *
Louisiana (All)	NELAP	30785	06-30-25
Minnesota	NELAP	1788752	12-31-25
Nevada	State	CO00026	07-31-25
New Hampshire	NELAP	2053	04-28-25
New Jersey	NELAP	230001	06-30-25
New York	NELAP	59923	04-01-25
North Dakota	State	R-034	01-08-25 *
Oklahoma	NELAP	8614	08-31-25
Oregon	NELAP	4025	01-08-26
Pennsylvania	NELAP	013	07-31-25
South Carolina	State	72002001	01-18-25 *
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183	09-30-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO00026	07-31-25
Virginia	NELAP	460232	06-14-25
Washington	State	C583	08-03-25
West Virginia DEP	State	354	11-30-25
Wisconsin	State	999615430	08-31-25
Wyoming (UST)	A2LA	2907.01	10-31-26

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Method Summary

Client: Haley & Aldrich, Inc.  
Project/Site: Heglar Dronquist Compliance  
Monitoring/0202548-004

Job ID: 590-29375-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET SPK
6010D	Metals (ICP)	SW846	EET SPK
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET SPK
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SPK

#### Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

#### Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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





## Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 590-29375-1

**Login Number: 29375**

**List Number: 1**

**Creator: Morris, Mackenzie 1**

**List Source: Eurofins Spokane**

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	

## Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 590-29375-1

**Login Number: 29375**

**List Number: 2**

**Creator: Roehsner, Karen P**

**List Source: Eurofins Denver**

**List Creation: 02/11/25 02:07 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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?	N/A	
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

