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ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT FORMER WEST ASH POND F.B. CULLEY GENERATING STATION WARRICK COUNTY, INDIANA

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for
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1. Annual Groundwater Monitoring Report Summary

1.1 40 CFR § 257.90(e)(6) SUMMARY

A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR [Coal Combustion Residuals] unit. At a minimum, the summary must specify all of the following:

1.1.1 40 CFR § 257.90(e)(6)(i) – Status of Monitoring Program at Start of Reporting Period

At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in §257.95;

At the start of the current annual reporting period, the F.B. Culley (FBC) former West Ash Pond (WAP) was operating under an assessment monitoring program in compliance with the Code of Federal Regulations Title 40 (40 CFR) § 257.95.

1.1.2 40 CFR § 257.90(e)(6)(ii) – Status of Monitoring Program at End of Reporting Period

At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95;

At the end of the current annual reporting period, the former WAP was operating under an assessment monitoring program in compliance with 40 CFR § 257.95.

1.1.3 40 CFR § 257.90(e)(6)(iii) – Statistically Significant Increases

If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to §257.94(e):

1.1.3.1 40 CFR § 257.90(e)(6)(iii)(A)

Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase; and

The former WAP is operating under an assessment monitoring program; therefore, no statistical evaluations were conducted on Appendix III constituents in 2024 and 2025.

1.1.3.2 40 CFR § 257.90(e)(6)(iii)(B)

Provide the date when the assessment monitoring program was initiated for the CCR unit.

An assessment monitoring program was established on February 7, 2020, for the former WAP to meet the requirements of 40 CFR § 257.95. The former WAP remained in assessment monitoring during 2024 and 2025.

1.1.4 40 CFR § 257.90(e)(6)(iv) – Statistically Significant Levels

If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to §257.95(g) include all of the following:

1.1.4.1 40 CFR § 257.90(e)(6)(iv)(A) – Statistically Significant Level Constituents

Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase;

Statistical analysis of Appendix IV constituents collected during the May 2024 sampling event was completed on September 20, 2024, within 90-days following the receipt of laboratory analytical results on June 30, 2024, per the requirements of 40 CFR § 257.93(h)(2). Statistically significant levels (SSLs) of lithium were identified in monitoring well WAP-3S downgradient of the former WAP, and molybdenum in downgradient wells WAP-3S and WAP-4S. A summary of the statistical analysis is provided in Appendix A.

Statistical analysis of Appendix IV constituents collected during the November 2024 sampling event was completed on March 20, 2025, within 90-days following the receipt of laboratory analytical results on December 28, 2024, per the requirements of 40 CFR § 257.93(h)(2). SSLs of lithium were identified in monitoring well WAP-3S downgradient of the former WAP and molybdenum in downgradient wells WAP-3S and WAP-4S. A summary of the statistical analysis is provided in Appendix A.

1.1.4.2 40 CFR § 257.90(e)(6)(iv)(B) – Initiation of the Assessment of Corrective Measures

Provide the date when the assessment of corrective measures was initiated for the CCR unit;

Assessment of corrective measures was initiated on October 30, 2020.

1.1.4.3 40 CFR § 257.90(e)(6)(iv)(C) – Assessment of Corrective Measures Public Meeting

Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and

The public meeting has not been held for the assessment of corrective measures for the former WAP. Evaluation of site-specific aspects, such as the off-site evaluation of the nature and extent of affected groundwater, are necessary to prepare for the public meeting and to inform the selection of remedy are in progress.

1.1.4.4 40 CFR § 257.90(e)(6)(iv)(D) – Completion of the Assessment of Corrective Measures

Provide the date when the assessment of corrective measures was completed for the CCR unit.

The assessment of corrective measures was completed on February 26, 2021, and placed into the facility's Operating Record, then subsequently posted to the publicly available website, and the notification sent to the state agency.

1.1.5 40 CFR § 257.90(e)(6)(v) – Selection of Remedy

Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of remedy selection; and

The selection of remedy required under 40 CFR § 257.97 is ongoing during 2024 and 2025 for lithium and molybdenum at the former WAP.

1.1.6 40 CFR § 257.90(e)(6)(vi) – Remedial Activities

Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.

No remedial activities have been initiated during 2024 and 2025; therefore, no demonstration or certification is applicable for this unit.

1.2 40 CFR § 257.90(a)

Except as provided for in § 257.100 for inactive CCR surface impoundments, all CCR landfills, CCR surface impoundments, and lateral expansions of CCR units are subject to the groundwater monitoring and corrective action requirements under § 257.90 through § 257.98.

The former WAP is subject to the groundwater monitoring and corrective action requirements described under 40 CFR § 257.90 through § 257.98 (Rule). The former WAP located at FBC was previously classified as an inactive surface impoundment as defined by 40 CFR § 257.53. The Southern Indiana Gas and Electric Company (SIGECO) filed a Notice of Intent (NOI) to initiate the closure of the former WAP and placed the NOI in the facility's Operating Record on December 17, 2015.

However, on August 5, 2016, the United States Environmental Protection Agency issued a "Direct Final Rule," effective on October 4, 2016, constituting a vacatur of 40 CFR § 257.100. The Direct Final Rule applies the requirements of existing surface impoundments that had been previously declared inactive. As a result, the former WAP had to comply with the groundwater monitoring requirements for existing CCR surface impoundments. The CCR Rule changes extended the deadlines to comply with the groundwater monitoring and corrective action requirements with the initial annual groundwater monitoring and corrective action report being placed in the facility's Operating Record by August 1, 2019, and annually thereafter.

SIGECO continued to pursue closure of the former WAP while complying with the requirements described in 40 CFR § 257.90 through § 257.98. The Indiana Department of Environmental Management (IDEM) issued their approval of the Closure/Post-Closure Plan in December 2019, and closure activities were completed in December 2020. As part of IDEM's approval, IDEM requested that additional wells be installed for post-closure monitoring. The groundwater monitoring network for the former WAP is shown on Figure 1.

This document addresses the requirement for the Owner/Operator to prepare an Annual Groundwater Monitoring and Corrective Action Report (Annual Report) per 40 CFR § 257.90(e).

1.3 40 CFR § 257.90(e) – SUMMARY

> ***Annual groundwater monitoring and corrective action report. For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by § 257.105(h)(1).***

As required by 40 CFR §257.100(e)(5)(ii), this Annual Report will be completed no later than August 1, 2025, due to the partial vacatur ordered by the District of Columbia Circuit Court on June 14, 2016, and the subsequent Direct Final Rule effective October 4, 2016, and within one year of the previous annual report being placed into the facility's Operating Record. As required, this Annual Report documents the status of the groundwater monitoring and corrective action program for the former WAP at FBC and summarizes key actions completed through the current reporting period.

1.3.1 Status of the Groundwater Monitoring Program

As provided in the notification on July 12, 2019, statistically significant increases of Appendix III constituents were identified downgradient of the former WAP. An evaluation of alternate sources was conducted; however, a successful alternate source demonstration was not achieved at that time. As a result, an Assessment Monitoring Program was initiated as required by 40 CFR § 257.94(e)(2). Annual and semiannual groundwater samples were collected as outlined in 40 CFR § 257.95(b) and § 257.95(d)(1), and groundwater protection standards (GWPS) were established as required by 40 CFR § 257.95(d)(2). Statistical analysis was completed on July 2, 2020, as described in 40 CFR § 257.93(h)(2), and SSLs of Appendix IV constituents above GWPS (lithium and molybdenum) were identified downgradient of the former WAP. As a result, an assessment of corrective measures was initiated as required by 40 CFR § 257.96. A 60-day extension to complete the assessment of corrective measures was required and certified by a professional engineer as required by 40 CFR § 257.96(a). Baseline sampling for downgradient wells installed to comply with IDEM approval of the Closure/Post-Closure Plan began in December 2020 and was completed in November 2021. Semiannual assessment monitoring is on-going.

During the 2024 to 2025 reporting period, laboratory analytical results from the May 2024 sampling event were received between June 30 and July 9, 2024, and; therefore, were not included in the 2023 to 2024 annual report previously submitted. Groundwater samples were collected from the monitoring wells at the former WAP from November 12 to 15, 2024, and again from May 13 to 30, 2025.

Groundwater monitoring well location and construction details for the existing monitoring well network are summarized in Table 1. Field forms pertaining to May 2024, November 2024, and May 2025 sampling events are included in Appendix B and laboratory analytical reports are included in Appendix C.

Statistical analysis of Appendix IV constituents during the 2024 reporting period determined that SSLs of lithium and molybdenum continue to be observed downgradient of the former WAP, which is consistent with previous findings. The selection of remedy process required under 40 CFR § 257.97 was still ongoing, as discussed in Section 1.1.5, during the 2024 to 2025 reporting period.

1.3.2 Key Actions Completed

The following key actions were completed during the 2024 to 2025 reporting period (from July 1, 2024 through June 30, 2025):

- July 15, 2024 – Collected groundwater and soil quality data to support the evaluation of various potential remedial alternatives.
- July 30, 2024 – Preparation of the 2023 to 2024 Annual Report including the following activities:
  - The 2023 to 2024 Annual Report was placed in the facility's Operating Record pursuant to 40 CFR § 257.105(h)(1);
  - Pursuant to 40 CFR § 257.107(h)(1), the 2023 to 2024 Annual Report was posted to the CCR Website within 30 days of the 2023 to 2024 Annual Report being placed in the facility's Operating Record [40 CFR § 257.107(d)] and 40 CFR § 257.107(h)(1)]; and
  - Pursuant to 40 CFR § 257.106(h)(1), the notification was sent to the relevant State Director and/or Tribal authority within 30 days of the 2023 to 2024 Annual Report being placed in the facility's Operating Record [§ 257.106(d)].
- September 20, 2024 – Completed statistical analysis of May 2024 assessment monitoring laboratory analytical results received on June 30, 2024 (Appendix A).
- October 4, 2024 – Completed the Bedrock Characterization Work Plan to assess bedrock lithology, extent, competency, fracture occurrence, and hydraulic conductivity beneath the former WAP to confirm the presence of a no-flow boundary and vertical delineation of the impacts observed from the former WAP.
- November 12 to 15, 2024 – Collected groundwater samples from monitoring wells at the former WAP for laboratory analysis in accordance with 40 CFR § 257.95(b) and 40 CFR § 257.95(d)(1). Groundwater elevations were measured in a synoptic round prior to sampling in accordance with 40 CFR § 257.93(c). Figure 2 presents a groundwater configuration map showing the November 2024 groundwater direction and velocity.
- March 20, 2025 – Completed statistical analysis of November 2024 assessment monitoring laboratory analytical results received on December 28, 2024 (Appendix A).
- May 9, 2025 – Concluded the Groundwater Flow Evaluation Work Plan to further refine understanding of groundwater flow direction, effects of Ohio River elevation on groundwater flow, and influence of nearby pumping wells. Groundwater data was collected from the pressure transducers deployed in the well network and analysis is ongoing at the end of the 2024 to 2025 reporting period.

- May 13 to 30, 2025 – Collected groundwater samples from monitoring wells at the former WAP for laboratory analysis in accordance with 40 CFR § 257.95(b) and 40 CFR § 257.95(d)(1). Groundwater elevations were measured in a synoptic round prior to sampling in accordance with 40 CFR § 257.93(c). Figure 3 presents a groundwater configuration map showing the May 2025 groundwater direction and velocity.
- Continued evaluation of the nature and extent of Appendix IV SSLs as required by 40 CFR § 257.95(g)(1). SIGECO began to develop a groundwater fate and transport model to support nature and extent evaluation as access to offsite areas of interest has not been authorized.

1.3.3 Problems Encountered

Problems were encountered during the May 2025 sampling event where a subset of samples collected were delayed in shipment by the carrier resulting in samples arriving out of temperature preservation at the laboratory.

1.3.4 Actions to Resolve Problems

Due to problems encountered during the May 2024 sampling event described in the 2023 to 2024 Annual Report, laboratory analytical results were not available to be previously reported. The May 2024 sampling laboratory analytical results are provided in this 2024 to 2025 Annual Report (Table 2, Table 3, and Table 4) along with field forms (Appendix B) and laboratory analytical reports (Appendix C).

Problems encountered during the May 2025 sampling event were corrected by re-sampling locations where original samples were affected by shipping delays. The time required to resample affected locations pushed delivery of laboratory analytical results for radium outside of the 2024 to 2025 reporting period. Therefore, radium results from those locations will be included in the 2025 to 2026 annual report.

1.3.5 Project Key Activities for Upcoming Year

Key activities planned to be completed through June 2026 include the following:

- Further define the nature and extent of lithium and molybdenum in groundwater downgradient of the former WAP using groundwater fate and transport modeling and results from the Groundwater Flow Evaluation Work Plan.
- Continue semiannual groundwater monitoring in accordance with 40 CFR § 257.95.
- Complete statistical analysis of the semiannual groundwater sampling results as required by 40 CFR § 257.93(h)(2).
- Prepare semiannual progress reports, as necessary, describing the progress in selecting and designing the remedy as outlined in 40 CFR § 257.97(a).
- Hold a public meeting at least 30 days prior to the selection of remedy with interested and affected parties in accordance with 40 CFR § 257.96(e) to discuss the results of the corrective measures assessment.
- As soon as feasible following the public meeting, select a remedy that, at a minimum, meets the standards outlined in 40 CFR § 257.97(b). As part of the selected remedy, SIGECO will develop a

schedule for implementing and completing remedial activities as defined in 40 CFR § 257.97(d) and develop a Corrective Action Groundwater Monitoring Program per 40 CFR § 257.98(a)(1).

1.4 40 CFR § 257.90(e) – INFORMATION

At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

1.4.1 40 CFR § 257.90(e)(1)

A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

As required by 40 CFR § 257.90(e)(1), a map showing the location of the former WAP, associated upgradient and downgradient wells installed to comply with the CCR Rule, wells installed to assess the nature and extent of Appendix IV SSLs, and monitoring wells required by IDEM as part of the agency's approval of the closure/post-closure plan are presented on Figure 1. A groundwater flow map for the November 2024 sampling event is included on Figure 2 and for the May 2025 sampling event on Figure 3.

1.4.2 40 CFR § 257.90(e)(2)

Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

No monitoring wells were installed or decommissioned during the preceding year. Location and construction details of the existing monitoring well network for the former WAP are provided for reference in Table 1.

1.4.3 40 CFR § 257.90(e)(3)

In addition to all the monitoring data obtained under § 257.90 through § 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

In accordance with 40 CFR § 257.95(b) and 40 CFR § 257.95(d)(1), two independent samples from each background and downgradient monitoring well were collected and analyzed for the CCR monitoring well network (WAP-1, CCR-AP-7, WAP-2RR, WAP-3S, WAP-4S, and WAP-5S) under the assessment monitoring program.

Summary tables including the sample names, dates of sample collection, reason for sample collection (detection, assessment, or baseline), and monitoring data obtained for the groundwater monitoring program for the former WAP are presented in Tables 2, 3, and 4 of this 2024 to 2025 Annual Report. Table 2 summarizes the assessment monitoring results for the original CCR monitoring network. Table 3 provides the results obtained to characterize the nature and extent of Appendix IV SSLs, and Table 4 includes the state-required baseline and detection sampling results at monitoring locations required by

IDEM. Field sampling and groundwater gauging forms are provided in Appendix B, and laboratory analytical data report for the May 2024, November 2024, and May 2025 sampling event is provided in Appendix C of this report.

1.4.4 40 CFR § 257.90(e)(4)

A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and

Statistical analysis was completed September 20, 2024, for the May 2024 sampling event and March 20, 2024, for the November 2024 sampling as described in 40 CFR § 257.93(h)(2), and the SSLs of lithium and molybdenum continue to be observed downgradient of the former WAP, consistent with previous results. As a result, the monitoring program did not change and the former WAP remained in assessment monitoring.

1.4.5 40 CFR § 257.90(e)(5)

Other information required to be included in the annual report as specified in § 257.90 through § 257.98.

Other information, including the development of groundwater protection standards, recording groundwater monitoring results in the Operating Record, and an evaluation of alternate sources was included in previous annual reports.

TABLES

TABLE 1

GROUNDWATER MONITORING WELL LOCATION AND CONSTRUCTION DETAILS

FORMER WEST ASH POND - F.B. CULLEY GENERATING STATION

WARRICK COUNTY, INDIANA

Well ID	Easting	Northing	Top of Pad Elevation (ft NAVD88)	Top of Casing Elevation (ft NAVD88)	Surface Grout (ft bgs)	Bentonite (ft bgs)	Sand Pack (ft bgs)	Screen Zone (ft bgs)	Screen Length (ft)	Well Diameter (in)
Upgradient Wells										
WAP-1	2882824.18	971214.16	403.70	403.42	0 - 22	22 - 24	24 - 36	26 - 36	10	2
CCR-AP-7	2883090.62	970774.82	432.70	432.41	0 - 16	16 - 18	18 - 30	20 - 30	10	2
Downgradient Wells										
(CCR Monitoring Network)										
WAP-2RR	2881499.12	971367.36	391.20	390.85	0 - 42.5	42 - 44.5	44.5 - 56	46 - 56	10	2
WAP-3S	2881252.74	970978.21	388.00	387.51	0 - 55	55 - 57	57 - 70	60 - 70	10	2
WAP-4S	2881333.44	970405.61	384.40	384.19	0 - 31	31 - 33	33 - 45	35 - 45	10	2
WAP-5S	2881521.50	970235.99	384.60	384.26	0 - 26	26 - 28	28 - 40	30 - 40	10	2
(Assessment of Nature & Extent)										
WAP-3D	2881253.27	970975.00	388.00	387.56	0 - 65.5	65.5 - 68	68 - 82.5	72.5 - 82.5	10	2
WAP-4I	2881329.18	970409.03	384.40	384.11	0 - 71	71- 73	73 - 85	65 - 75	10	2
WAP-4D	2881325.46	970412.34	384.30	384.13	0 - 112	112 - 114	114 - 126	106 - 116	10	2
WAP-5I	2881524.86	970232.71	384.60	384.26	0 - 71	71 - 73	73 - 85	65 - 75	10	2
WAP-5D	2881528.86	970299.98	384.60	384.28	0 - 109	109 - 111	111 - 123	103 - 113	10	2
WAP-9S	2881066.97	970697.87	392.80	392.56	0 - 51	51 - 53	53 - 65	55 - 65	10	2
WAP-9I	2881069.92	970702.05	392.80	392.68	0 - 76	76 - 78	78 - 90	80 - 90	10	2
WAP-9D	2881063.93	970693.08	392.80	392.48	0 - 112.5	112.5 - 114.5	114.5 - 126.5	116.5 - 126.5	10	2
(IDEM Approval of Closure/Post-Closure Plan)										
WAP-6S	2881090.90	970688.34	385.90	385.44	0 - 36	36 - 38	38 - 50	40 - 50	10	2
WAP-6I	2881088.36	970683.39	385.70	385.43	0 - 65.5	65.5 - 67.5	67.5 - 80	70 - 80	10	2
WAP-6D	2881092.66	970693.03	385.80	385.37	0 - 101	101 - 103	103 - 117	105.5 - 115.5	10	2
WAP-7S	2881365.37	971161.46	388.90	388.52	0 - 45	45 - 47	47 - 60	50 - 60	10	2
WAP-7D	2881363.50	971158.04	389.10	388.81	0 - 64	64 - 66	66 - 80	68.5 - 78.6	10	2
WAP-8S	2881309.60	970636.56	384.30	384.16	0 - 35	35 - 37.5	37.5 - 50	40 - 50	10	2
WAP-8I	2881317.73	970629.97	384.50	384.29	0 - 65.5	65.5 - 67.5	67.5 - 80	70 - 80	10	2
WAP-8D	2881313.46	970633.68	384.40	384.12	0 - 92.5	92.5 - 94.5	94.5 - 107	97 - 107	10	2

NOTES:

bgs = below ground surface

ft = feet

in = inches

NAVD88 = Datum of Elevations in North American Vertical Datum of 1988

TABLE 2
SUMMARY OF GROUNDWATER QUALITY DATA FROM THE ORIGINAL CCR MONITORING NETWORK
FORMER WEST ASH POND - F.B. CULLEY GENERATING STATION
WARRICK COUNTY, INDIANA

Location Group	Criteria	Up-Gradient						Down-Gradient					
Location Name		CCR-AP-7	CCR-AP-7	CCR-AP-7	WAP-1	WAP-1	WAP-1	WAP-2RR	WAP-2RR	WAP-2RR	WAP-3S	WAP-3S	WAP-3S
Sample Name		CCR-AP-7-20240510	CCR-AP-7-20241115	CCR-AP-7-20250515	WAP-1-20240603	WAP-1-20241113	WAP-1-20250516	WAP-2RR-20240530	WAP-2RR-20241113	WAP-2RR-053025	WAP-3S-20240530	WAP-3S-20241113	WAP-3S-053025
Sample Date	GWPS	05/10/2024	11/15/2024	05/15/2025	06/03/2024	11/13/2024	05/16/2025	05/30/2024	11/13/2024	05/30/2025	05/30/2024	11/13/2024	05/30/2025
				180-190644-22			180-190644-1						
Lab Sample ID		180-173881-1	180-182934-5	180-190649-5	180-174967-1	180-182730-4	180-190649-1	180-174967-2	180-182735-1	180-191166-1	180-174967-3	180-182735-2	180-191166-2
Detection Monitoring - EPA Appendix III Constituents (mg/L)													
Boron, Total	4	0.1 U	0.1 U	**0.024 J**	**0.061 J**	0.1 U	**0.58**	**1.9**	**2**	**2.5**	**5.4**	**3.5**	**2.8**
Calcium, Total	NA	**120**	**120**	**130**	**180**	**180**	**230**	**110**	**110**	**110**	**140**	**95**	**110**
Chloride	NA	**43**	**43**	**42**	**76**	**75**	**75 J-**	**38**	**44**	**40 J-**	**61**	**37**	**47 J-**
Fluoride	4	**0.31**	**0.41**	**0.34 J+**	**0.27**	**0.24**	**0.37 J+**	**0.33**	**0.29**	**0.25 J+**	**0.42**	**0.42**	**0.38 J+**
pH (lab) (pH units)	NA	**7.2 J**	**7.1 J**	**7.1**	**7.2 J**	**7.1 J**	**7**	**6.9 J**	**6.7 J**	**6.7 J**	**7.7 J**	**7.8 J**	**7.8 J**
Sulfate	NA	**110**	**86**	**100**	**330**	**300**	**400 J-**	**97**	**79**	**110 J-**	**300**	**130**	**190 J-**
Total Dissolved Solids (TDS)	NA	**630**	**600**	**880**	**980**	**980**	**1100**	**500**	**520**	**530**	**700**	**430**	**550**
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)													
Antimony, Total	0.006	0.002 U	0.002 U	0.002 U	**0.00091 J**	0.002 U	**0.0011 J**	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	**0.0009 J**	**0.0042 J**	**0.0018 J**	**0.0038 J**	**0.0029 J**	**0.0028 J**	0.005 U	**0.0016 J**	**0.0013 J**	0.005 U	0.005 U	**0.00095 J**
Barium, Total	2	**0.1**	**0.12**	**0.12**	**0.44**	**0.41**	**0.38**	**0.038**	**0.057**	**0.029**	**0.055**	**0.037**	**0.045**
Beryllium, Total	0.004	0.001 U	0.001 U	0.001 U	**0.0009 J**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, Total	0.005	0.001 U	**0.000097 J**	0.001 U	**0.00026 J**	0.001 U	0.001 U	**0.00027 J**	**0.00028 J**	**0.00037 J**	**0.00024 J**	**0.00012 J**	**0.000093 J**
Chromium, Total	0.1	0.005 U	0.005 U	0.005 U	**0.01**	**0.0039 J**	**0.0023 J**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, Total	0.019	**0.0003 J**	**0.00036 J**	**0.00032 J**	**0.0054**	**0.0016**	**0.001**	**0.0013**	**0.0013**	**0.0014**	**0.0012**	**0.00078 J**	**0.00089 J**
Fluoride	4	**0.31**	**0.41**	**0.34 J+**	**0.27**	**0.24**	**0.37 J+**	**0.33**	**0.29**	**0.25 J+**	**0.42**	**0.42**	**0.38 J+**
Lead, Total	0.035	0.001 U	0.001 U	0.001 U	**0.008**	**0.0036**	**0.0022**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium, Total	0.04	**0.011**	**0.0098**	**0.011**	**0.013**	**0.0071 J**	**0.0072 J**	**0.021**	**0.019**	**0.02**	**0.11**	**0.1**	**0.1**
Mercury, Total	0.002	0.0002 U	**0.00032 J-**	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	**0.0013 J**	**0.0011 J**	0.005 U	**0.0014 J**	0.005 U	0.005 U	**0.081**	**0.08**	**0.079**	**0.44**	**0.46**	**0.4**
Selenium, Total	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	**0.0071**	**0.004 J**	**0.0039 J**	0.005 U	0.005 U	0.005 U
Thallium, Total	0.002	0.001 U	0.001 U	0.001 U	**0.00029 J**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)													
Radium-226	NA	**0.337 ± 0.148**	**0.496 ± 0.169**	-0.0487 U ± 0.0974	**0.573 ± 0.184**	**0.525 ± 0.195**	**0.975 ± 0.494**	0.009 U ± 0.0594	**0.178 ± 0.112**	-	**0.413 ± 0.143**	0.0899 U ± 0.0808	-
Radium-228	NA	0.529 U ± 0.367	0.358 U ± 0.507	0.326 U ± 0.397	**0.72 ± 0.45**	-0.128 U ± 0.481	1.03 U ± 0.761	0.179 U ± 0.308	0.049 U ± 0.458	-	**0.79 ± 0.412**	0.0326 U ± 0.399	-
Radium-226 & 228	5	**0.866 J ± 0.396**	**0.854 J ± 0.534**	0.326 U ± 0.409	**1.29 ± 0.486**	0.525 UJ ± 0.519	**2 J ± 0.907**	0.188 U ± 0.314	0.227 UJ ± 0.471	-	**1.2 ± 0.436**	0.122 U ± 0.407	-
Field Parameters													
Temperature (Deg C)	NA	**17.68**	**15.91**	**20.86**	**19.95**	**17.09**	**28.33**	**17.04**	**16.89**	**19.51**	**18.34**	**17.14**	**19.81**
Dissolved Oxygen, Field (mg/L)	NA	**0.05**	**0.22**	**0.11**	**3.77**	**9.72**	**2.82**	**0.06**	**0.07**	**0.32**	**0.09**	**0.1**	**0.37**
Conductivity, Field (mS/cm)	NA	**0.6171**	**1.0125**	**1.0207**	**0.85824**	**0.66**	**1.0192**	**0.39797**	**0.7646**	**0.824**	**0.23047**	**0.63046**	**0.8**
Oxidation Reduction Potential (ORP), Field (mv)	NA	**-111.4**	**-101.6**	**-70.5**	**-84.3**	**-2.8**	**-84.9**	**0.6**	**72.4**	**328**	**-126.1**	**-23**	**73**
Turbidity, Field (NTU)	NA	**28.94**	**5.57**	**5.43**	**137.18**	**22.78**	**41.79**	**34.3**	**0**	**0**	**0.43**	**8.77**	**1.1**
pH, Field (pH units)	NA	**7.26**	**7.16**	**7.04**	**7.19**	**7.35**	**7.04**	**6.72**	**6.68**	**6.88**	**7.63**	**7.79**	**8.31**

Abbreviations and Notes:

CCR: Coal Combustion Residuals.
mg/L: milligram per liter.
mS/cm: millSiemen per centimeter.
mv: millivolts.
NTU: Nephelometric Turbidity Units.
pCi/L: picoCurie per liter.
GWPS: Groundwater Protection Standard.
MCL: Maximum Contaminant Level.
RSL: Regional Screening Level.
EPA: United States Environmental Protection Agency.
Results in bold are detected.

- EPA. 2020. Final Rule: Disposal of Coal Combustion Residuals from Electric Utilities. July 26. 40 CFR Part 257. https://www.epa.gov/coalash/coal-ash-rule
- GWPS is the maximum of the MCL or RSL where no MCL is available or the Upper Tolerance Limit.

Qualifiers:

J: value is estimated
J+: value is estimated with a potential high bias
J-: value is estimated with a potential low bias
U: not detected, value is the laboratory reporting limit
U: activity level below the Minimum Detectable Concentration (Radiological)

TABLE 2
SUMMARY OF GROUNDWATER QUALITY DATA FROM THE ORIGINAL CCR MONITORING NETWORK
FORMER WEST ASH POND - F.B. CULLEY GENERATING STATION
WARRICK COUNTY, INDIANA

Location Group	Criteria	Down-Gradient						
Location Name		WAP-4S	WAP-4S	WAP-4S	WAP-5S	WAP-5S	WAP-5S	WAP-5S
Sample Name		WAP-4S-20240531	WAP-4S-20241112	WAP-4S-20250513	WAP-5S-20240531	WAP-5S-20241112	DUP-1-20241112	WAP-5S-20250513
Sample Date	GWPS	05/31/2024	11/12/2024	05/13/2025	05/31/2024	11/12/2024	11/12/2024	05/13/2025
				180-190515-1				180-190515-4
Lab Sample ID		180-174967-5	180-182735-4	180-190644-5	180-174967-6	180-182735-7	180-182735-14	180-190644-8
Detection Monitoring - EPA Appendix III Constituents (mg/L)								
Boron, Total	4	**14**	**12**	**12**	**6.8**	**6.6**	**5.9**	**6.9**
Calcium, Total	NA	**270**	**230**	**220**	**240**	**230**	**190**	**220**
Chloride	NA	**110**	**110**	**82 J-**	**68**	**71**	**73**	**62 J-**
Fluoride	4	**0.21 J+**	**0.25**	**0.15 J+**	**0.1 J+**	**0.084 J**	**0.23 J**	**0.12 J+**
pH (lab) (pH units)	NA	**7.3 J**	**7.3 J**	**7.4 J**	**6.8 J**	**6.8 J**	**6.7 J**	**6.9 J**
Sulfate	NA	**430**	**400**	**320 J-**	**500**	**580**	**490**	**560 J-**
Total Dissolved Solids (TDS)	NA	**1100**	**1100**	**900**	**1200**	**1200**	**1200**	**1100**
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)								
Antimony, Total	0.006	0.002 U	0.002 U	**0.0006 J**	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	**0.0052**	**0.0061**	**0.0089**	0.005 U	**0.00086 J**	0.005 U	**0.00092 J**
Barium, Total	2	**0.054**	**0.044**	**0.058**	**0.044**	**0.046**	**0.04**	**0.044**
Beryllium, Total	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, Total	0.005	**0.00034 J**	**0.00011 J**	**0.00015 J**	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, Total	0.1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, Total	0.019	**0.0018**	**0.0015**	**0.0014**	**0.0043**	**0.0065**	**0.0055**	**0.0051**
Fluoride	4	**0.21 J+**	**0.25**	**0.15 J+**	**0.1 J+**	**0.084 J**	**0.23 J**	**0.12 J+**
Lead, Total	0.035	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium, Total	0.04	**0.0026 J**	0.008 U	**0.0067 J**	**0.0027 J**	0.008 U	0.008 U	0.008 U
Mercury, Total	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	**0.49**	**0.45**	**0.42**	0.005 U	0.005 U	0.005 U	0.005 U
Selenium, Total	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Thallium, Total	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)								
Radium-226	NA	**0.151 ± 0.0984**	0.0821 U ± 0.0857	**0.275 ± 0.189**	0.0348 U ± 0.0995	-0.0421 U ± 0.0777	0.102 U ± 0.111	0.17 U ± 0.253
Radium-228	NA	0.284 U ± 0.368	0.149 U ± 0.463	0.196 U ± 0.312	0.0887 U ± 0.332	0.0454 U ± 0.556	0.37 U ± 0.41	0.454 U ± 0.511
Radium-226 & 228	5	0.434 UJ ± 0.381	0.231 U ± 0.471	0.471 UJ ± 0.365	0.124 U ± 0.347	0.0454 U ± 0.561	0.471 U ± 0.425	0.624 U ± 0.57
Field Parameters								
Temperature (Deg C)	NA	**25.73**	**16.14**	**18.58**	**24.48**	**17.04**	**17.04**	**18.77**
Dissolved Oxygen, Field (mg/L)	NA	**0.1**	**0.06**	**0.09**	**0.1**	**0.12**	**0.12**	**0.03**
Conductivity, Field (mS/cm)	NA	**0.30638**	**1.3222**	**1.4086**	**0.29732**	**1.3952**	**1.3952**	**1.586**
Oxidation Reduction Potential (ORP), Field (mv)	NA	**-116.5**	**-45.1**	**-85.5**	**-141.8**	**21.8**	**21.8**	**-16.1**
Turbidity, Field (NTU)	NA	**0**	**0**	**9.89**	**0**	**0**	**0**	**0.07**
pH, Field (pH units)	NA	**7.06**	**7.26**	**7.28**	**7.23**	**6.55**	**6.55**	**6.67**

Abbreviations and Notes:

CCR: Coal Combustion Residuals.
mg/L: milligram per liter.
mS/cm: millSiemen per centimeter.
mv: millivolts.
NTU: Nephelometric Turbidity Units.
pCi/L: picoCurie per liter.
GWPS: Groundwater Protection Standard.
MCL: Maximum Contaminant Level.
RSL: Regional Screening Level.
EPA: United States Environmental Protection Agency.
Results in bold are detected.

- EPA. 2020. Final Rule: Disposal of Coal Combustion Residuals from Electric Utilities. July 26. 40 CFR Part 257. https://www.epa.gov/coalash/coal-ash-rule
- GWPS is the maximum of the MCL or RSL where no MCL is available or the Upper Tolerance Limit.

Qualifiers:

J: value is estimated
J+: value is estimated with a potential high bias
J-: value is estimated with a potential low bias
U: not detected, value is the laboratory reporting limit
U: activity level below the Minimum Detectable Concentration (Radiological)

TABLE 3
SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS
INSTALLED TO ASSESS THE NATURE AND EXTENT OF APPENDIX IV
FORMER WEST ASH POND - F.B. CULLEY GENERATING STATION
WARRICK COUNTY, INDIANA

Location Group	Criteria	Assessment of Nature & Extent													
Location Name		WAP-3D	WAP-3D	WAP-3D	WAP-3D	WAP-4D	WAP-4D	WAP-4D	WAP-4I	WAP-4I	WAP-4I	WAP-4I	WAP-5D	WAP-5D	WAP-5D
Sample Name		WAP-3D-20240530	DUP-1-20240530	WAP-3D-20241113	WAP-3D-053025	WAP-4D-20240522	WAP-4D-20241112	WAP-4D-20250513	WAP-4I-20240522	WAP-4I-20241112	WAP-4I-20250513	DUP-2-20250513	WAP-5D-20240531	WAP-5D-20241112	WAP-5D-20250513
Sample Date	GWPS	05/30/2024	05/30/2024	11/13/2024	05/30/2025	05/22/2024	11/12/2024	05/13/2025	05/22/2024	11/12/2024	05/13/2025	05/13/2025	05/31/2024	11/12/2024	05/13/2025
Lab Sample ID		180-174967-4	180-174967-18	180-182735-3	180-191166-3	180-174632-2	180-182735-6	180-190515-3 180-190644-7	180-174632-1	180-182735-5	180-190515-2 180-190644-6	180-190515-14	180-174967-8	180-182735-9	180-190515-6 180-190644-10
Detection Monitoring - EPA Appendix III Constituents (mg/L)															
Boron, Total	4	**4.8**	**4.7**	**4**	**3.2**	0.1 U	0.1 U	**0.07**	0.1 U	**0.1**	**0.037 J**	**0.029 J**	**0.058 J**	0.1 U	**0.054**
Calcium, Total	NA	**150**	**150**	**120**	**140**	**49**	**44**	**49**	**31**	**47**	**33**	**33**	**50**	**42**	**48**
Chloride	NA	**56**	**56**	**43**	**53 J-**	**20**	**21**	**23**	**18**	**36**	**26 J-**	**27 J-**	**20**	**21**	**21 J-**
Fluoride	4	**0.34**	**0.33**	**0.28**	**0.28 J+**	**0.14 J+**	**0.13**	**0.12**	**0.13 J+**	**0.14**	**0.13 J+**	**0.18 J+**	**0.13 J+**	**0.13**	**0.12 J+**
Sulfate	NA	**340**	**330**	**230**	**290 J-**	**24**	**22**	**27**	**38**	**60**	**45 J-**	**45 J-**	**37**	**39**	**42 J-**
Total Dissolved Solids (TDS)	NA	**780**	**750**	**620**	**720**	**220**	**230**	**220**	**180**	**260**	**190**	**190**	**200**	**210**	**240**
pH (lab) (pH units)	NA	**7.7 J**	**7.8 J**	**7.6 J**	**7.5 J**	**7.6 J**	**7.6 J**	**7.5 J**	**7.5 J**	**7.3 J**	**7.6 J**	**7.5 J**	**7.4 J**	**7.3 J**	**7.3 J**
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)															
Antimony, Total	0.006	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	0.005 U	0.005 U	0.005 U	0.005 U	**0.01**	**0.0083**	**0.0098**	**0.003 J**	**0.0046 J**	**0.0047 J**	**0.0043 J**	**0.011**	**0.0088**	**0.011**
Barium, Total	2	**0.019**	**0.019**	**0.015**	**0.018**	**0.28**	**0.27**	**0.3**	**0.12**	**0.2**	**0.13**	**0.13**	**0.22**	**0.19**	**0.21**
Beryllium, Total	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, Total	0.005	**0.00023 J**	**0.00022 J**	**0.00058 J**	**0.00016 J**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.000091 J**	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, Total	0.1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, Total	0.019	**0.001**	**0.0011**	**0.00099 J**	**0.001**	**0.00024 J**	**0.00018 J**	**0.00018 J**	**0.00045 J**	**0.00049 J**	**0.00044 J**	**0.00045 J**	0.001 U	0.001 U	0.001 U
Fluoride	4	**0.34**	**0.33**	**0.28**	**0.28 J+**	**0.14 J+**	**0.13**	**0.12**	**0.13 J+**	**0.14**	**0.13 J+**	**0.18 J+**	**0.13 J+**	**0.13**	**0.12 J+**
Lead, Total	0.035	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium, Total	0.04	**0.1**	**0.099**	**0.075**	**0.094**	**0.0037 J**	0.008 U	0.008 U	**0.0029 J**	**0.0048 J**	0.008 U	0.008 U	**0.0022 J**	0.008 U	0.008 U
Mercury, Total	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	**0.29**	**0.29**	**0.25**	**0.27**	**0.0055**	**0.0049 J**	**0.0058**	**0.0019 J**	**0.0027 J**	**0.0022 J**	**0.002 J**	**0.0039 J**	**0.0033 J**	**0.0039 J**
Selenium, Total	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Thallium, Total	0.002	0.001 U	0.001 U	0.001 U	0.001 U	**0.00034 J**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)															
Radium-226	NA	0.033 U ± 0.0833	**0.312 ± 0.118**	0.0966 U ± 0.0859	-	**0.331 ± 0.136**	**0.225 ± 0.129**	**0.476 ± 0.255**	**0.329 ± 0.127**	**0.378 ± 0.151**	0.0393 U ± 0.141	**0.398 ± 0.25**	**0.394 ± 0.141**	**0.397 ± 0.147**	0.148 U ± 0.223
Radium-228	NA	**0.895 ± 0.394**	0.471 U ± 0.33	0.4 U ± 0.427	-	0.193 U ± 0.371	0.235 U ± 0.444	0.471 U ± 0.38	-0.327 U ± 0.39	0.338 U ± 0.364	0.193 U ± 0.383	0.469 U ± 0.364	**0.576 ± 0.34**	-0.0804 U ± 0.347	**1.05 ± 0.516**
Radium-226 & 228	5	**0.928 J ± 0.403**	**0.783 J ± 0.35**	0.497 U ± 0.436	-	0.524 UJ ± 0.395	0.46 UJ ± 0.462	**0.947 J ± 0.458**	0.329 UJ ± 0.41	**0.716 J ± 0.394**	0.232 U ± 0.408	**0.867 J ± 0.442**	**0.97 ± 0.368**	0.397 UJ ± 0.377	**1.2 J ± 0.562**
Field Parameters															
Temperature (Deg C)	NA	**17.15**	**17.14**	**17.02**	**19.47**	**19.56**	**18.25**	**17.66**	**16.36**	**19.33**	**16.84**	**16.84**	**26.17**	**18.31**	**18.94**
Dissolved Oxygen, Field (mg/L)	NA	**0.122**	**0.13**	**0.09**	**0.39**	**0.12**	**0.11**	**0**	**0.06**	**0.14**	**0**	**0**	**0.05**	**0.13**	**0**
Conductivity, Field (mS/cm)	NA	**0.40577**	**0.29112**	**0.82575**	**1.03**	**0.26714**	**0.35425**	**0.43203**	**0.64562**	**0.40735**	**0.34573**	**0.34573**	**0.33602**	**0.35349**	**0.42722**
Oxidation Reduction Potential (ORP), Field (mv)	NA	**-18.2**	**-28.4**	**11.5**	**97**	**-18.2**	**-125.5**	**-159.1**	**-21.8**	**-24.4**	**-41.2**	**-41.2**	**-32.2**	**-84**	**-119.2**
Turbidity, Field (NTU)	NA	**2.45**	**3.3**	**0.7**	**0**	**71.86**	**0**	**0.04**	**43.31**	**0**	**1.69**	**1.69**	**0.75**	**0**	**0.13**
pH, Field (pH units)	NA	**7.58**	**7.72**	**7.48**	**8.04**	**7.33**	**7.69**	**7.51**	**7.22**	**7.35**	**7.21**	**7.21**	**6.93**	**7.38**	**7.36**

Abbreviations and Notes:

CCR: Coal Combustion Residuals.
mg/L: milligram per liter.
mS/cm: millSiemen per centimeter.
mv: millivolts.
NTU: Nephelometric Turbidity Units.
pCi/L: picoCurie per liter.
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EPA: United States Environmental Protection Agency.
Results in bold are detected.

- EPA. 2020. Final Rule: Disposal of Coal Combustion Residuals from Electric Utilities. July 26. 40 CFR Part 257. https://www.epa.gov/coalash/coal-ash-rule
- GWPS is the maximum of the MCL or RSL where no MCL is available or the Upper Tolerance Limit.

Qualifiers:

J: value is estimated
J+: value is estimated with a potential high bias
J-: value is estimated with a potential low bias
U: not detected, value is the laboratory reporting limit
U: activity level below the Minimum Detectable Concentration (Radiological)

TABLE 4
SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS
INSTALLED TO COMPLY WITH IDEM APPROVAL OF CLOSURE/POST-CLOSURE PLAN
FORMER WEST ASH POND - F.B. CULLEY GENERATING STATION
WARRICK COUNTY, INDIANA

Location Group	Criteria	West Ash Pond												
Location Name		WAP-6D	WAP-6D	WAP-6D	WAP-6I	WAP-6I	WAP-6I	WAP-6I	WAP-6S	WAP-6S	WAP-6S	WAP-7D	WAP-7D	WAP-7D
Sample Name		WAP-6D-20240523	WAP-6D-20241113	WAP-6D-20250514	WAP-6I-20240523	WAP-6I-20241113	DUP-2-20241113	WAP-6I-20250514	WAP-6S-20240531	WAP-6S-20241114	WAP-6S-20250514	WAP-7D-20240530	WAP-7D-20241113	WAP-7D-053025
Sample Date	GWPS	05/23/2024	11/13/2024	05/14/2025	05/23/2024	11/13/2024	11/13/2024	05/14/2025	05/31/2024	11/14/2024	05/14/2025	05/30/2024	11/13/2024	05/30/2025
Lab Sample ID		180-174632-4	180-182735-11	180-190515-9 180-190644-13	180-174632-3	180-182735-10	180-182735-15	180-190515-8 180-190644-12	180-174967-9	180-182934-1	180-190515-7 180-190644-11	180-174967-11	180-182735-13	180-191166-5
Detection Monitoring - EPA Appendix III Constituents (mg/L)														
Boron, Total	4	0.1 U	0.1 U	**0.053**	0.1 U	**0.1**	**0.1**	**0.085**	**1.8**	**1.4**	**1.7**	**11**	**9.3**	**8.7**
Calcium, Total	NA	**40**	**37**	**42**	**34**	**46**	**41**	**40**	**96**	**74**	**90**	**350**	**330**	**320**
Chloride	NA	**22**	**21**	**25 J-**	**21**	**29**	**29**	**21 J-**	**36**	**23**	**38 J-**	**110**	**100**	**99 J-**
Fluoride	4	**0.14 J+**	**0.12**	**0.19**	**0.15 J+**	**0.12**	**0.12**	**0.17 J+**	**0.42**	**0.76**	**0.57 J+**	**0.31**	**0.31**	**0.33 J+**
pH (lab) (pH units)	NA	**7.5 J**	**7.4 J**	**7.4 J**	**7.6 J**	**7.4 J**	**7.4 J**	**7.5 J**	**7.3 J**	**7.4 J**	**7.2 J**	**7.3 J**	**7.2 J**	**7.2 J**
Sulfate	NA	**42**	**36**	**38 J-**	**40**	**42**	**42**	**34 J-**	**96**	**65**	**100 J-**	**970**	**880**	**910 J-**
Total Dissolved Solids	NA	**210**	**190**	**210**	**200**	**240**	**240**	**220**	**440**	**340**	**400**	**1700**	**1800**	**1800**
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)														
Antimony, Total	0.006	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	**0.0066**	**0.0047 J**	**0.0061**	**0.0048 J**	**0.012 J**	**0.0068 J**	**0.0067**	0.005 U	0.005 U	0.005 U	**0.00078 J**	**0.0013 J**	**0.0016 J**
Barium, Total	2	**0.19**	**0.17**	**0.2**	**0.15**	**0.22**	**0.19**	**0.2**	**0.05**	**0.04**	**0.048**	**0.028**	**0.029**	**0.028**
Beryllium, Total	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, Total	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.00012 J**	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, Total	0.1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, Total	0.019	0.001 U	0.001 U	**0.00011 J**	**0.00024 J**	**0.00045 J**	**0.00034 J**	**0.00032 J**	**0.00057 J**	**0.00051 J**	**0.00073 J**	**0.0031**	**0.0036**	**0.0034**
Fluoride	4	**0.14 J+**	**0.12**	**0.19**	**0.15 J+**	**0.12**	**0.12**	**0.17 J+**	**0.42**	**0.76**	**0.57 J+**	**0.31**	**0.31**	**0.33 J+**
Lead, Total	0.035	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium, Total	0.04	**0.0039 J**	0.008 U	0.008 U	**0.0045 J**	**0.0043 J**	**0.0034 J**	**0.0038 J**	**0.0042 J**	**0.0035 J**	0.008 U	**0.056**	**0.056**	**0.053**
Mercury, Total	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	**0.0001 J**	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	**0.002 J**	**0.0021 J**	**0.0028 J**	**0.0044 J**	**0.0043 J**	**0.0037 J**	**0.0041 J**	**0.13**	**0.12**	**0.12**	**0.19**	**0.18**	**0.17**
Selenium, Total	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Thallium, Total	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)														
Radium-226	NA	**0.337 ± 0.127**	**0.388 ± 0.169**	0.3 U ± 0.29	**0.16 ± 0.0884**	**0.264 ± 0.147**	**0.262 ± 0.133**	0.165 U ± 0.219	0.0392 U ± 0.0867	0.0833 U ± 0.0795	0.141 U ± 0.213	**0.403 ± 0.145**	**0.391 ± 0.156**	-
Radium-228	NA	0.485 U ± 0.537	0.0709 U ± 0.314	0.0698 U ± 0.291	-0.163 U ± 0.321	0.273 U ± 0.395	0.261 U ± 0.446	0.234 U ± 0.301	**0.69 ± 0.451**	0.44 U ± 0.404	**0.801 ± 0.48**	0.0668 U ± 0.402	**0.676 ± 0.394**	-
Radium-226 & 228	5	0.823 UJ ± 0.552	0.459 UJ ± 0.357	0.369 U ± 0.411	0.16 UJ ± 0.333	0.537 UJ ± 0.421	0.523 UJ ± 0.465	0.399 U ± 0.372	**0.73 J ± 0.459**	0.523 U ± 0.412	**0.942 J ± 0.525**	0.47 UJ ± 0.427	**1.07 ± 0.424**	-
Field Parameters														
Temperature (Deg C)	NA	**24.15**	**16.05**	**18.9**	**21.96**	**16.69**	**16.69**	**19.48**	**17.29**	**15.79**	**19.36**	**17.29**	**17.09**	**19.55**
Dissolved Oxygen, Field (mg/L)	NA	**0.08**	**0.16**	**0.09**	**0.06**	**0.09**	**0.09**	**0.17**	**0.05**	**0.48**	**0.13**	**0.05**	**0.13**	**0.4**
Conductivity, Field (mS/cm)	NA	**0.34701**	**0.32571**	**0.40039**	**0.50578**	**0.3988**	**0.3988**	**0.35194**	**0.78685**	**0.57575**	**0.49687**	**0.78685**	**1.9185**	**2.21**
Oxidation Reduction Potential (ORP), Field (mv)	NA	**-110**	**-102.3**	**-151**	**-31.7**	**-45.5**	**-45.5**	**-118.1**	**-51.4**	**192.6**	**-96.5**	**-51.4**	**-43.1**	**141**
Turbidity, Field (NTU)	NA	**0**	**0**	**2.34**	**12.06**	**0**	**0**	**0.9**	**0.15**	**0**	**9.44**	**0.15**	**0**	**1.8**
pH, Field (pH units)	NA	**7.1**	**7.6**	**7.53**	**6.93**	**7.53**	**7.53**	**7.5**	**1.22**	**7.4**	**7.24**	**1.22**	**7.21**	**7.44**

Abbreviations and Notes:

CCR: Coal Combustion Residuals.
mg/L: milligram per liter.
mS/cm: millSiemen per centimeter.
mv: millivolts.
NTU: Nephelometric Turbidity Units.
pCi/L: picoCurie per liter.
GWPS: Groundwater Protection Standard.
MCL: Maximum Contaminant Level.
RSL: Regional Screening Level.
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Qualifiers:

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U: activity level below the Minimum Detectable Concentration (Radiological)

TABLE 4
SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS
INSTALLED TO COMPLY WITH IDEM APPROVAL OF CLOSURE/POST-CLOSURE PLAN
FORMER WEST ASH POND - F.B. CULLEY GENERATING STATION
WARRICK COUNTY, INDIANA

Location Group	Criteria	West Ash Pond												
Location Name		WAP-7S	WAP-7S	WAP-7S	WAP-8D	WAP-8D	WAP-8D	WAP-8I	WAP-8I	WAP-8I	WAP-8S	WAP-8S	WAP-8S	WAP-8S
Sample Name		WAP-7S-20240530	WAP-7S-20241113	WAP-7S-053025	WAP-8D-20240603	WAP-8D-20241112	WAP-8D-20250516	WAP-8I-20240531	WAP-8I-20241112	WAP-8I-053025	WAP-8S-20240531	DUP-2-20240531	WAP-8S-20241112	WAP-8S-053025
Sample Date	GWPS	05/30/2024	11/13/2024	05/30/2025	06/03/2024	11/12/2024	05/16/2025	05/31/2024	11/12/2024	05/30/2025	05/31/2024	05/31/2024	11/12/2024	05/30/2025
Lab Sample ID		180-174967-10	180-182735-12	180-191166-4	180-174967-14	180-182730-1	180-190644-18 180-190649-4	180-174967-13	180-182730-2	180-191166-7	180-174967-12	180-174967-19	180-182730-3	180-191166-6
Detection Monitoring - EPA Appendix III Constituents (mg/L)														
Boron, Total	4	**13**	**12**	**11**	**0.078 J**	**0.057 J**	**0.069**	**0.088 J**	**0.086 J**	**0.11**	**2**	**1.9**	**3.3**	**1.4**
Calcium, Total	NA	**190**	**160**	**160**	**49**	**39**	**48**	**43**	**48**	**43**	**140**	**140**	**160**	**94**
Chloride	NA	**84**	**72**	**73 J-**	**4.6**	**19**	**28 J-**	**26**	**29**	**28 J-**	**71**	**71**	**96**	**60 J-**
Fluoride	4	**0.11 J+**	**0.097 J**	**0.08 J+**	**0.11 J+**	**0.17**	**0.14 J+**	**0.18 J+**	**0.17**	**0.2 J+**	**0.16 J+**	**0.17 J+**	**0.13**	**0.22 J+**
pH (lab) (pH units)	NA	**9.8 J**	**10.2 J**	**9.5 J**	**7.4 J**	**7.4 J**	**7.4**	**7.5 J**	**7.5 J**	**7.4 J**	**7.4 J**	**7.6 J**	**7.4 J**	**7.4 J**
Sulfate	NA	**440**	**370**	**370 J-**	**48**	**43**	**57 J-**	**56**	**45**	**64 J-**	**280**	**290**	**420**	**180 J-**
Total Dissolved Solids	NA	**850**	**730**	**770**	**240**	**210**	**260**	**240**	**250**	**260**	**720**	**730**	**900**	**550**
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)														
Antimony, Total	0.006	**0.0011 J**	**0.001 J**	**0.00097 J**	0.002 U	**0.00061 J**	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	**0.0058**	**0.0076**	**0.0062**	**0.0032 J**	**0.0036 J**	**0.0035 J**	**0.0031 J**	**0.0032 J**	**0.0052**	**0.016**	**0.015**	**0.017**	**0.015**
Barium, Total	2	**0.051**	**0.04**	**0.049**	**0.083**	**0.067**	**0.088**	**0.05**	**0.058**	**0.062**	**0.13**	**0.13**	**0.14**	**0.091**
Beryllium, Total	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, Total	0.005	0.001 U	0.001 U	0.001 U	0.001 U	**0.00022 J**	0.001 U	0.001 U	**0.00012 J**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, Total	0.1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, Total	0.019	0.001 U	0.001 U	0.001 U	0.001 U	**0.00019 J**	0.001 U	**0.00029 J**	**0.00053 J**	**0.00048 J**	**0.0017**	**0.0017**	**0.0024**	**0.0012**
Fluoride	4	**0.11 J+**	**0.097 J**	**0.08 J+**	**0.11 J+**	**0.17**	**0.14 J+**	**0.18 J+**	**0.17**	**0.2 J+**	**0.16 J+**	**0.17 J+**	**0.13**	**0.22 J+**
Lead, Total	0.035	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium, Total	0.04	**0.2**	**0.2**	**0.2**	**0.003 J**	**0.0035 J**	0.008 U	**0.0038 J**	**0.0036 J**	0.008 U	**0.023**	**0.024**	**0.024**	**0.018**
Mercury, Total	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	**0.27**	**0.19**	**0.24**	**0.0013 J**	**0.0019 J**	**0.0013 J**	**0.021**	**0.018**	**0.021**	**0.19**	**0.19**	**0.25**	**0.18**
Selenium, Total	0.05	0.005 U	**0.00099 J**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Thallium, Total	0.002	0.001 U	0.001 U	0.001 U	0.001 U	**0.00063 J+**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)														
Radium-226	NA	**0.185 ± 0.107**	0.16 U ± 0.122	-	**0.255 ± 0.111**	0.101 U ± 0.0856	**0.458 ± 0.241**	**0.142 ± 0.0914**	0.107 U ± 0.0869	-	**0.194 ± 0.103**	**0.124 ± 0.0868**	**0.251 ± 0.107**	-
Radium-228	NA	**0.649 ± 0.34**	0.52 U ± 0.399	-	0.287 U ± 0.326	0.343 U ± 0.485	0.58 U ± 0.403	0.156 U ± 0.325	-0.186 U ± 0.421	-	**1.51 ± 0.565**	0.378 U ± 0.326	-0.156 U ± 0.398	-
Radium-226 & 228	5	**0.833 ± 0.356**	**0.68 ± 0.417**	**-**	**0.542 J ± 0.344**	0.444 U ± 0.492	**1.04 J ± 0.47**	0.298 UJ ± 0.338	0.107 U ± 0.43	**-**	**1.71 ± 0.574**	0.502 UJ ± 0.337	0.251 UJ ± 0.412	**-**
Field Parameters														
Temperature (Deg C)	NA	**17.39**	**17.31**	**20.35**	**15.92**	**15.44**	**18.87**	**15.6**	**16.08**	**21.22**	**15.93**	**15.93**	**15.4**	**20**
Dissolved Oxygen, Field (mg/L)	NA	**0.09**	**0.09**	**0.31**	**0.04**	**0.27**	**0**	**0.09**	**0.73**	**0.2**	**0.07**	**0.07**	**0.19**	**0.83**
Conductivity, Field (mS/cm)	NA	**0.62929**	**0.94999**	**0.963**	**0.18931**	**0.28744**	**0.431**	**0.21312**	**0.35871**	**0.43**	**0.48541**	**0.48541**	**0.97041**	**7.94**
Oxidation Reduction Potential (ORP), Field (mv)	NA	**-66.4**	**-54.2**	**143**	**-112.7**	**-141.2**	**-100.8**	**-66.9**	**-55.8**	**-28**	**-133.4**	**-133.4**	**-155.8**	**-119**
Turbidity, Field (NTU)	NA	**0.15**	**0**	**0**	**2.31**	**0**	**1.36**	**27.77**	**0**	**3.4**	**1.82**	**1.82**	**0.04**	**0**
pH, Field (pH units)	NA	**10.53**	**10.79**	**10.53**	**7.6**	**7.54**	**7.75**	**7.45**	**7.38**	**7.84**	**7.5**	**7.5**	**7.43**	**7.94**

Abbreviations and Notes:

CCR: Coal Combustion Residuals.
mg/L: milligram per liter.
mS/cm: millSiemen per centimeter.
mv: millivolts.
NTU: Nephelometric Turbidity Units.
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GWPS: Groundwater Protection Standard.
MCL: Maximum Contaminant Level.
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- GWPS is the maximum of the MCL or RSL where no MCL is available or the Upper Tolerance Limit.

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U: activity level below the Minimum Detectable Concentration (Radiological)

Qualifiers:

J: value is estimated
J+: value is estimated with a potential high bias
J-: value is estimated with a potential low bias
U: not detected, value is the laboratory reporting limit
U: activity level below the Minimum Detectable Concentration (Radiological)

TABLE 3
SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS
INSTALLED TO ASSESS THE NATURE AND EXTENT OF APPENDIX IV
FORMER WEST ASH POND - F.B. CULLEY GENERATING STATION
WARRICK COUNTY, INDIANA

Location Group	Criteria	Assessment of Nature & Extent												
Location Name		WAP-5I	WAP-5I	WAP-5I	WAP-5I	WAP-9D	WAP-9D	WAP-9D	WAP-9I	WAP-9I	WAP-9I	WAP-9S	WAP-9S	WAP-9S
Sample Name		WAP-5I-20240531	WAP-5I-20241112	WAP-5I-20250513	DUP-1-20250513	WAP-9D-20240531	WAP-9D-20241114	WAP-9D-20250514	WAP-9I-20240530	WAP-9I-20241114	WAP-9I-20250514	WAP-9S-20240530	WAP-9S-20241114	WAP-9S-20250514
Sample Date	GWPS	05/31/2024	11/12/2024	05/13/2025	05/13/2025	05/31/2024	11/14/2024	05/14/2025	05/30/2024	11/14/2024	05/14/2025	05/30/2024	11/14/2024	05/14/2025
Lab Sample ID		180-174967-7	180-182735-8	180-190644-9	180-190515-13	180-174967-17	180-182934-4	180-190644-21	180-174967-16	180-182934-3	180-190644-20	180-174967-15	180-182934-2	180-190644-19
Detection Monitoring - EPA Appendix III Constituents (mg/L)														
Boron, Total	4	0.1 U	**0.087 J**	**0.042 J**	**0.034 J**	0.1 U	0.1 U	**0.058**	**0.11**	**0.13**	**0.17**	**1.3**	**1.2**	**0.89**
Calcium, Total	NA	**33**	**49**	**35**	**33**	**40**	**42**	**40**	**40**	**49**	**48**	**86**	**70**	**80**
Chloride	NA	**20**	**34**	**26 J-**	**26 J-**	**22**	**24**	**23 J-**	**22**	**29**	**25 J-**	**31**	**23**	**31 J-**
Fluoride	4	**0.14 J+**	**0.13**	**0.13 J+**	**0.12 J+**	**0.14 J+**	**0.14**	**0.18 J+**	**0.15 J+**	**0.14**	**0.2 J+**	**0.54**	**0.53**	**0.58 J+**
Sulfate	NA	**42**	**63**	**47 J-**	**47 J-**	**42**	**43**	**37 J-**	**39**	**42**	**42 J-**	**90**	**40**	**77 J-**
Total Dissolved Solids (TDS)	NA	**170**	**270**	**200**	**190**	**190**	**210**	**200**	**200**	**260**	**250**	**410**	**330**	**420**
pH (lab) (pH units)	NA	**7.5 J**	**7.3 J**	**7.4 J**	**7.4 J**	**7.5 J**	**7.6 J**	**7.5 J**	**7.7 J**	**7.6 J**	**7.5 J**	**7.6 J**	**7.7 J**	**7.5 J**
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)														
Antimony, Total	0.006	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	**0.021**	**0.0091**	**0.007**	**0.0079**	**0.0051**	**0.0054**	**0.005**	**0.0057**	**0.0073**	**0.0068**	0.005 U	**0.001 J**	**0.0012 J**
Barium, Total	2	**0.097**	**0.14**	**0.094**	**0.093**	**0.18**	**0.19**	**0.18**	**0.11**	**0.14**	**0.16**	**0.13**	**0.11**	**0.11**
Beryllium, Total	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, Total	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, Total	0.1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	**0.0013 J**	0.005 U
Cobalt, Total	0.019	**0.00053 J**	**0.00047 J**	**0.00035 J**	**0.00036 J**	0.001 U	**0.000088 J**	**0.00014 J**	**0.00023 J**	**0.00025 J**	**0.00028 J**	**0.0007 J**	**0.00071 J**	**0.00071 J**
Fluoride	4	**0.14 J+**	**0.13**	**0.13 J+**	**0.12 J+**	**0.14 J+**	**0.14**	**0.18 J+**	**0.15 J+**	**0.14**	**0.2 J+**	**0.54**	**0.53**	**0.58 J+**
Lead, Total	0.035	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	**0.00045 J**
Lithium, Total	0.04	**0.0028 J**	**0.0051 J**	0.008 U	0.008 U	**0.0037 J**	0.008 U	0.008 U	**0.0042 J**	**0.0042 J**	**0.0042 J**	**0.0097**	**0.009**	**0.0094**
Mercury, Total	0.002	0.0002 U	0.0002 U	0.0002 U	**0.000087 J**	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	**0.0018 J**	**0.0019 J**	**0.0017 J**	**0.0015 J**	**0.0021 J**	**0.0022 J**	**0.0023 J**	**0.0087**	**0.008**	**0.0081**	**0.11**	**0.1**	**0.089**
Selenium, Total	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Thallium, Total	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)														
Radium-226	NA	**0.318 ± 0.131**	**0.286 ± 0.147**	0 U ± 0.212	0.345 U ± 0.305	**0.31 ± 0.126**	**0.403 ± 0.157**	0.307 U ± 0.25	0.106 U ± 0.0843	0.0954 U ± 0.0799	0.0703 U ± 0.219	**0.209 ± 0.103**	**0.256 ± 0.134**	0.126 U ± 0.229
Radium-228	NA	**0.761 ± 0.408**	0.485 U ± 0.507	**0.921 ± 0.547**	0.517 U ± 0.531	0.286 U ± 0.345	0.605 U ± 0.423	0.188 U ± 0.348	**0.55 ± 0.359**	**0.791 ± 0.379**	0.394 U ± 0.471	0.435 U ± 0.355	**0.827 ± 0.505**	0.0834 U ± 0.424
Radium-226 & 228	5	**1.08 ± 0.429**	0.771 UJ ± 0.528	**0.921 J ± 0.587**	**0.862 ± 0.612**	**0.596 J ± 0.367**	**1.01 J ± 0.451**	0.494 U ± 0.428	**0.656 J ± 0.369**	**0.886 J ± 0.387**	0.465 U ± 0.519	**0.644 J ± 0.37**	**1.08 ± 0.522**	0.209 U ± 0.482
Field Parameters														
Temperature (Deg C)	NA	**23.59**	**19.45**	**17.2**	**17.2**	**19.35**	**16.36**	**20.9**	**17.3**	**16.77**	**20.24**	**16.14**	**16.88**	**20.09**
Dissolved Oxygen, Field (mg/L)	NA	**0.02**	**0.1**	**0**	**0**	**3.93**	**0.21**	**0.4**	**6.08**	**0.17**	**0.1**	**2.8**	**0.16**	**0**
Conductivity, Field (mS/cm)	NA	**1.2555**	**0.32896**	**0.35602**	**0.35602**	**0.24595**	**396.85**	**0.37256**	**0.23733**	**0.44689**	**0.47727**	**0.26973**	**0.56365**	**0.72348**
Oxidation Reduction Potential (ORP), Field (mv)	NA	**23.7**	**-8.8**	**-43.6**	**-43.6**	**-64.4**	**-106.2**	**-163.4**	**2.4**	**-65.2**	**-105.8**	**50.5**	**3**	**-102**
Turbidity, Field (NTU)	NA	**0**	**4.98**	**8.13**	**8.13**	**0.32**	**0**	**0.65**	**1.94**	**0**	**0.25**	**0.32**	**19.09**	**19.82**
pH, Field (pH units)	NA	**6.29**	**7.15**	**7.26**	**7.26**	**7.38**	**7.59**	**7.52**	**7.51**	**7.53**	**7.18**	**7.69**	**7.7**	**7.39**

Abbreviations and Notes:

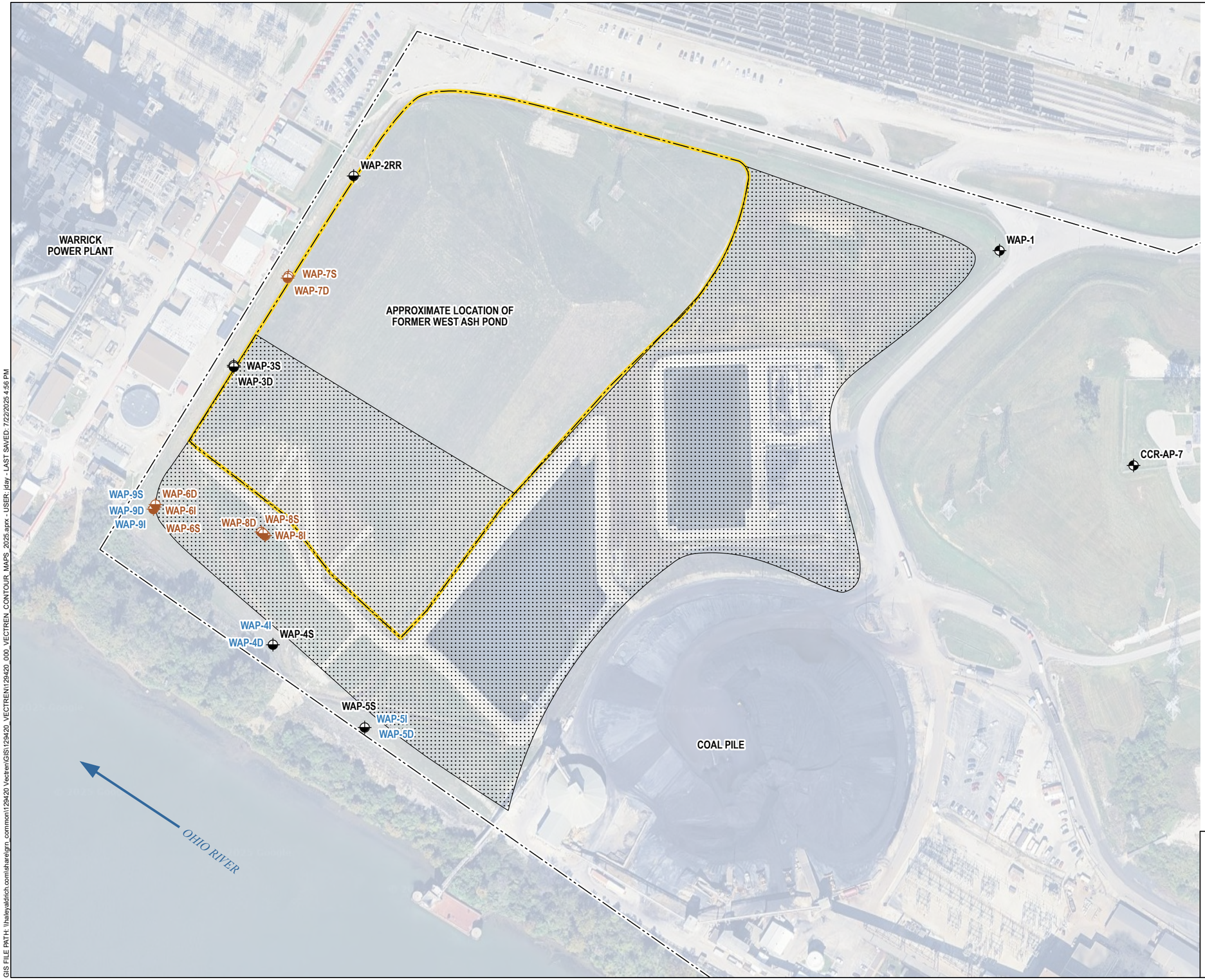
CCR: Coal Combustion Residuals.
mg/L: milligram per liter.
mS/cm: millSiemen per centimeter.
mv: millivolts.
NTU: Nephelometric Turbidity Units.
pCi/L: picoCurie per liter.
GWPS: Groundwater Protection Standard.
MCL: Maximum Contaminant Level.
RSL: Regional Screening Level.
EPA: United States Environmental Protection Agency.
Results in bold are detected.

- EPA. 2020. Final Rule: Disposal of Coal Combustion Residuals from Electric Utilities. July 26. 40 CFR Part 257. https://www.epa.gov/coalash/coal-ash-rule
- GWPS is the maximum of the MCL or RSL where no MCL is available or the Upper Tolerance Limit.

Qualifiers:

J: value is estimated
J+: value is estimated with a potential high bias
J-: value is estimated with a potential low bias
U: not detected, value is the laboratory reporting limit
U: activity level below the Minimum Detectable Concentration (Radiological)

FIGURES



LEGEND

- UPGRADIENT GROUNDWATER MONITORING WELL
- DOWNGRADIENT GROUNDWATER MONITORING WELL
- DOWNGRADIENT WELL TO ASSESS NATURE AND EXTENT OF APPENDIX IV SSLs
- DOWNGRADIENT WELL TO COMPLY WITH IDEM APPROVAL OF CLOSURE/POST CLOSURE PLAN
- GROUNDWATER FLOW DIRECTION
- APPROXIMATE LIMITS OF WEST ASH POND CCR REMOVAL
- APPROXIMATE UNIT BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. DEFINITIONS:
   CCR = COAL COMBUSTION RESIDUALS
3. AERIAL IMAGERY SOURCE: GOOGLE EARTH

N

0 200 400
SCALE IN FEET

HALEY ALDRICH

FORMER WEST ASH POND
F.B. CULLEY GENERATING STATION
WARRICK COUNTY, INDIANA

GROUNDWATER MONITORING WELL NETWORK

JULY 2025

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\share\grn_common\1294\20 VectrenGIS\129420_VECTREN\129420_000_VECTREN_CONTOUR_MAPS_2025.aprx - USER: jday - LAST SAVED: 7/22/2025 4:56 PM

WARRICK
POWER PLANT

APPROXIMATE LOCATION
OF FORMER WEST ASH POND

WAP-2RR
353.55

WAP-7S
353.29

WAP-7D

WAP-3S
353.76

WAP-3D

WAP-9I
WAP-9S
354.06
WAP-9D

WAP-6D
WAP-6S
353.73
WAP-6I

WAP-8S
354.59
WAP-8D

WAP-8I

WAP-4D
WAP-4I

WAP-4S
354.51

WAP-5S
355.98
WAP-5I

WAP-5D

PZ-3
378.58

PZ-6
389.88

WAP-1
389.47

PZ-5
ND

PZ-7
387.26

PZ-4
ND

CCR-AP-7
416.68

V = 718 FT/YR

V = 1 FT/YR

V = 140 FT/YR

354

355

360

365

370

375

380

385

390

395

400

405

410

415

COAL PILE

OHIO RIVER
358.06 FT
NAVD88

LEGEND

- UPGRADIENT MONITORING WELL
- DOWNGRADIENT MONITORING WELL
- PIEZOMETER
- GROUNDWATER FLOW DIRECTION
- GROUNDWATER ELEVATION CONTOUR, 1-FT INTERVAL, DASHED WHERE INFERRED
- GROUNDWATER ELEVATION CONTOUR, 5-FT INTERVAL, DASHED WHERE INFERRED
- APPROXIMATE LIMITS OF WEST ASH POND CCR REMOVAL
- UNIT BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. DEFINITIONS:
CCR = COAL COMBUSTION RESIDUALS
ND = NO DATA
NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988

3. WATER LEVELS GAGED ON NOVEMBER 11, 2024.

4. OHIO RIVER LEVEL COLLECTED BY USGS OWENSBORO GAGE #03303502 ON NOVEMBER 11, 2024 AT 12:00 PM.

5. GROUNDWATER VELOCITY SHOWN IN FEET PER YEAR.

6. $V = \frac{K(i)}{n_e}$

V = GROUNDWATER VELOCITY (FT/YR)
K = HYDRAULIC CONDUCTIVITY (FT/YR)
i = GROUNDWATER GRADIENT
n_e = EFFECTIVE POROSITY

7. AERIAL IMAGERY SOURCE: GOOGLE, AUGUST 10, 2024

N

0 200 400
SCALE IN FEET

HALEY ALDRICH

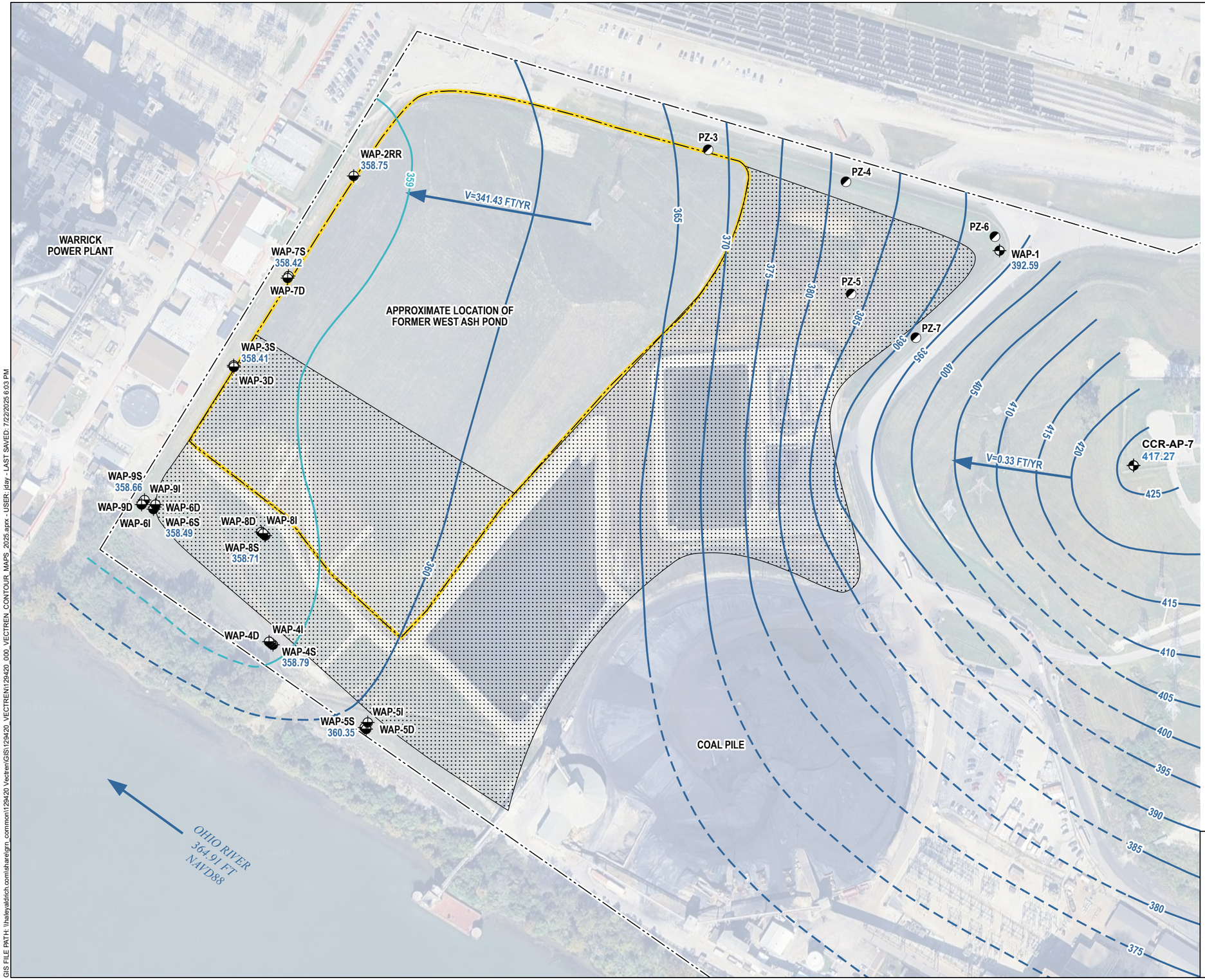
FORMER WEST ASH POND
F.B. CULLEY GENERATING STATION
WARRICK COUNTY, INDIANA

SHALLOW GROUNDWATER CONFIGURATION - NOVEMBER 2024

JULY 2025

FIGURE 2

GIS FILE PATH: \\haleyaldrich.com\share\grn_common\129420 Vectren\GIS\129420_VECTREN\129420_VECTREN.aprx - USER: tciskowski - LAST SAVED: 1/15/2025 11:32 AM



LEGEND

- UPGRADIENT GROUNDWATER MONITORING WELL
- DOWNGRADIENT GROUNDWATER MONITORING WELL
- PIEZOMETER
- GROUNDWATER FLOW DIRECTION
- GROUNDWATER ELEVATION CONTOUR, 5-FT INTERVAL, DASHED WHERE INFERRED
- GROUNDWATER ELEVATION CONTOUR, 1-FT INTERVAL, DASHED WHERE INFERRED
- APPROXIMATE LIMITS OF WEST ASH POND CCR REMOVAL
- APPROXIMATE UNIT BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. WATER LEVELS GAUGED MAY 12, 2025.
3. OHIO RIVER LEVEL COLLECTED BY USGS OWENSBORO GAGE #03303502 ON MAY 12, 2025 AT 12:00 PM.
4. GROUNDWATER VELOCITY (V) SHOWING FEET PER YEAR (FT/YR).
   NET VELOCITY FORMULA:
   $V = \frac{k(i)}{n_e}$
   k = HYDRAULIC CONDUCTIVITY
   i = GROUNDWATER GRADIENT
   n_e = EFFECTIVE POROSITY
5. DEFINITIONS:
   CCR = COAL COMBUSTION RESIDUALS
   NAVD88 = NORTH AMERICAN VERTICAL DATUM OF 1988
6. AERIAL IMAGERY SOURCE: GOOGLE EARTH

N

0 200 400
SCALE IN FEET

HALEY ALDRICH

FORMER WEST ASH POND
F.B. CULLEY GENERATING STATION
WARRICK COUNTY, INDIANA

SHALLOW GROUNDWATER CONFIGURATION - MAY 2025

JULY 2025

FIGURE 3

GIS FILE PATH: \\haleyaldrich.com\share\grn_common\129420 Vectren\GIS\129420_VECTREN\129420_000_VECTREN_CONTOUR_MAPS_2025.aprx - USER: jday - LAST SAVED: 7/22/2025 6:03 PM

APPENDIX A
Summary of Statistical Analysis

HALEY & ALDRICH, INC.
400 Augusta St.
Suite 100
Greenville, SC 29601
864.214.8771

TECHNICAL MEMORANDUM

20 September 2024
File No. 0129420-032

TO: Southern Indiana Gas and Electric Company

FROM: Haley & Aldrich, Inc.
Todd Plating, Program Manager, Geologist
Steven F. Putrich, P.E., Project Principal

SUBJECT: Statistical Evaluation of the May 2024 Semi-annual Groundwater Assessment Monitoring Data
Southern Indiana Gas and Electric Company
West Ash Pond
F.B. Culley Generating Station; Warrick County, Indiana

Pursuant to Title 40 Code of Federal Regulations (40 CFR) § 257.93 and § 257.95 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the May 2024 semi-annual assessment monitoring event for the F.B. Culley Generating Station West Ash Pond (WAP). Haley & Aldrich, Inc. (Haley & Aldrich) completed this statistical evaluation to determine if Appendix IV groundwater monitoring constituents have been detected in downgradient wells at statistically significant levels (SSL) greater than the Groundwater Protection Standards (GWPS), consistent with the requirements in 40 CFR § 257.95.

Methods used during this statistical analysis are described in Haley & Aldrich's 2017 *Statistical Data Analysis Plan for the F.B. Culley Generating Station*. A summary of how applicable performance standards described in 40 CFR § 257.93 (g) were achieved include:

- 40 CFR § 257.93 (g) (1) – Data set distribution was evaluated using basic summary statistics, graphical methods including probability plots, and the Shapiro-Wilk Test for Normality. Data sets were also evaluated for statistical outliers using box plots and either Dixon's Q Test for Outliers or Rosner's Outlier Test depending on sample size. Outlier identification and data set distribution groups are summarized in Attachment A. For background limit calculations, parametric methods were used for normally distributed data sets and non-parametric methods were used for non-normally distributed data sets.
- 40 CFR § 257.93 (g) (2) – Not applicable

- 40 CFR § 257.93 (g) (3) – Not applicable
- 40 CFR § 257.93 (g) (4) – Levels of confidence and additional supporting information for the use of tolerance intervals and prediction limits are included in Attachment A.
- 40 CFR § 257.93 (g) (5) – Non-detect values were accounted for by simple substitution, where the detection limit replaced the non-detect result. Non-detect values are identified and summarized in Attachment A.
- 40 CFR § 257.93 (g) (6) – Time series plots for groundwater monitoring wells included in this evaluation were reviewed to identify potential seasonal variability. No additional statistics to account for seasonality or spatial variability were necessary. Temporal trends were evaluated using the non-parametric Mann-Kendall Trend Test and Theil-Sen Estimator.

Data from the groundwater sampling event for the downgradient monitoring wells (WAP-2RR, WAP-3S, WAP-4S and WAP-5S) were compared to the GWPS established from the background dataset for the upgradient monitoring wells (WAP-1 and CCR-AP-7) for detected Appendix IV constituents. May 2024 analytical results are summarized in Table 1. GWPS for each of the Appendix IV constituents have been set equal to the highest value of the maximum contaminant level (MCL), regional screening level (RSL), or background concentration. The results of the assessment monitoring statistical evaluation are discussed below and provided in Attachment A.

Development of Groundwater Protection Standard

The Rule provides four specific options for statistical evaluation of groundwater quality data collected at a coal combustion residual (CCR) unit (40 CFR §257.93(f) (1-4)). Haley & Aldrich certified the tolerance limit (TL) as the statistical method used for developing BTVs for the GWPS on 14 January 2019. As noted above, the GWPS for each of the Appendix IV constituents have been set equal to the highest value of the MCL, RSL, or BTV (TL). The most recent groundwater sampling result from each compliance well was compared to the GWPS to determine if additional statistical testing is warranted.

STATISTICAL EVALUATION

BTVs are periodically updated per the document *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009* (Unified Guidance). Prior to calculating BTVs, data were evaluated for outlier results, data distribution, and spatial and temporal variability. Potential outlier sample results that would warrant removal from the data set based on likely error in sampling or measurement were identified through statistical outlier using the outliers (version 0.15) R programming package and either the Dixon's or Rosner's Test for Outliers. Potential outliers were further evaluated by visual inspection of box plots and probability plots, and field forms and analytical laboratory reports were reviewed as necessary. No sample data were identified as outliers that warranted removal from the dataset.

Background data distributions were assessed using the stats (version 4.3.3) R programming package and either the Shapiro-Wilk or Shapiro-Francia Test for Normality. Data distributions were further evaluated

by visual inspection of probability and distribution plots. Data distributions inform appropriate BTV calculation methods. Background and downgradient data sets were evaluated for spatial and temporal variability by visual inspection of box plots and time series plots and using the Mann-Kendall Trend Tests (Kendall R programming package, version 2.2.1) and Theil-Sen Estimator (trend R programming package, version 1.1.6). Spatial and temporal variability in background data sets inform appropriate BTV calculation methods.

INTERWELL BACKGROUND EVALUATION

An interwell statistical evaluation was used to determine the TL and identify potential SSLs for detected Appendix IV constituents. The interwell evaluation compares the most recent value from downgradient compliance wells to a background dataset composed of pooled upgradient well data. TLs were calculated from the pooled background well dataset utilizing R programming language and the EnvStats (version 2.8.1) and tolerance (version 2.0.0) packages. The TL procedure is one in which a concentration limit for each constituent is established from the distribution of the background data, with a minimum 95 percent confidence level. The upper endpoint of a tolerance interval is called the UTL. Depending on the data distribution, parametric or non-parametric TL procedures are used. Parametric TLs utilize normally distributed data or data normalized via a transformation of the background data used to construct the limit. If the data are non-normal and a transformation is not indicated, non-parametric procedures (order statistics or bootstrap methods) are used to calculate the TL. If all the background data are non-detect, a maximum reporting limit may serve as an appropriate UTL.

GWPS COMPARISON AND LCL CALCULATIONS

A lower confidence limit (LCL) was calculated for any Appendix IV constituent measured in a downgradient well during the May 2024 sampling event at a concentration greater than the GWPS. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence, or conversely, with a low probability of error. An SSL is indicated when the downgradient well/constituent-specific LCL is greater than the GWPS.

TREND SUMMARY

Mann-Kendall trend analyses were performed on data sets from downgradient wells of sufficient sample size as described above. Results of the trend analysis are summarized in Table 2. Trends indicated for constituents identified as SSLs are summarized below:

- Lithium in WAP-3S is increasing (trend confirmed by Thiel-Sen test, Sen's slope)
- Molybdenum in WAP-3S is decreasing
- Molybdenum in WAP-4S is increasing (trend confirmed by Thiel-Sen test), however no trend was identified in recent data (samples collected between August 2018 and May 2024)

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

The sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the May 2024 assessment monitoring event were compared to their respective GWPS (Attachment A). LCLs were calculated where constituents were detected at concentrations greater than a GWPS. An SSL is indicated when the LCL is greater than the GWPS. SSLs are summarized in the table below. Based on previous compliance sampling events and statistical evaluations, interwell comparisons were utilized for all downgradient wells and constituents. Based on this statistical evaluation, lithium, and molybdenum remain as the only Appendix IV constituent SSLs downgradient of the WAP. This information is provided for Southern Indiana Gas and Electric Company's records. Because no new constituents were identified as SSLs, additional notification pertaining to the statistical analysis of the May 2024 groundwater analytical results is not required at this time.

Statistically Significant Level Summary - Appendix IV Constituents

Location	Constituent	May 2024 Concentration (mg/L)	Newly Identified SSL
WAP-3S	Lithium, Total	0.11	No
WAP-3S	Molybdenum, Total	0.44	No
WAP-4S	Molybdenum, Total	0.49	No

Notes:
mg/L = milligrams per liter

Enclosure

Table 1. Summary of Groundwater Quality Data - May 2024
Table 2. Trend Summary

Attachment A – Assessment Monitoring Statistical Analysis Summary

TABLES

TABLE 1
SUMMARY OF GROUNDWATER QUALITY DATA - MAY 2024
F.B. CULLEY GENERATING STATION - WEST ASH POND
WARRICK COUNTY, INDIANA

Location Group	Action Level	Background		Downgradient			
Location Name	GWPS	CCR-AP-7	WAP-1	WAP-2RR	WAP-3S	WAP-4S	WAP-5S
Sample Name		CCR-AP-7-20240510	WAP-1-20240603	WAP-2RR-20240530	WAP-3S-20240530	WAP-4S-20240531	WAP-5S-20240531
Sample Date		05/10/2024	06/03/2024	05/30/2024	05/30/2024	05/31/2024	05/31/2024
Lab Sample ID		180-173881-1	180-174967-1	180-174967-2	180-174967-3	180-174967-5	180-174967-6
Detection Monitoring - Appendix III Constituents (mg/L)							
Boron, Total	4	0.1 U	**0.061 J**	**1.9**	**5.4**	**14**	**6.8**
Calcium, Total	NA	**120**	**180**	**110**	**140**	**270**	**240**
Chloride	NA	**43**	**76**	**38**	**61**	**110**	**68**
Fluoride	4	**0.31**	**0.27**	**0.33**	**0.42**	**0.21 J+**	**0.1 J+**
pH (lab) (pH units)	NA	**7.2 J**	**7.2 J**	**6.9 J**	**7.7 J**	**7.3 J**	**6.8 J**
Sulfate	NA	**110**	**330**	**97**	**300**	**430**	**500**
Total Dissolved Solids (TDS)	NA	**630**	**980**	**500**	**700**	**1100**	**1200**
Assessment Monitoring - Appendix IV Constituents (mg/L)							
Antimony, Total	0.006	0.002 U	**0.00091 J**	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	**0.0009 J**	**0.0038 J**	0.005 U	0.005 U	**0.0052**	0.005 U
Barium, Total	2	**0.1**	**0.44**	**0.038**	**0.055**	**0.054**	**0.044**
Beryllium, Total	0.004	0.001 U	**0.0009 J**	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, Total	0.005	0.001 U	**0.00026 J**	**0.00027 J**	**0.00024 J**	**0.00034 J**	0.001 U
Chromium, Total	0.1	0.005 U	**0.01**	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, Total	0.019	**0.0003 J**	**0.0054**	**0.0013**	**0.0012**	**0.0018**	**0.0043**
Fluoride	4	**0.31**	**0.27**	**0.33**	**0.42**	**0.21 J+**	**0.1 J+**
Lead, Total	0.035	0.001 U	**0.008**	0.001 U	0.001 U	0.001 U	0.001 U
Lithium, Total	0.04	**0.011**	**0.013**	**0.021**	**0.11**	**0.0026 J**	**0.0027 J**
Mercury, Total	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	**0.0013 J**	**0.0014 J**	**0.081**	**0.44**	**0.49**	0.005 U
Selenium, Total	0.05	0.005 U	0.005 U	**0.0071**	0.005 U	0.005 U	0.005 U
Thallium, Total	0.002	0.001 U	**0.00029 J**	0.001 U	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)							
Radium-226	NA	**0.337 ± 0.148**	**0.573 ± 0.184**	1 U ± 0.0594	**0.413 ± 0.143**	**0.151 ± 0.0984**	1 U ± 0.0995
Radium-228	NA	1 U ± 0.367	**0.72 ± 0.45**	1 U ± 0.308	**0.79 ± 0.412**	1 U ± 0.368	1 U ± 0.332
Radium-226 & 228	5	**0.866 J ± 0.396**	**1.29 ± 0.486**	5 U ± 0.314	**1.2 ± 0.436**	5 UJ ± 0.381	5 U ± 0.347
Field Parameters							
Temperature (Deg C)	NA	**18.49**	**20**	**17.62**	**17.91**	**18.46**	**21.55**
Dissolved Oxygen, Field (mg/L)	NA	**2.72**	**2.99**	**0.11**	**0.13**	**0.08**	**0.37**
Conductivity, Field (mS/cm)	NA	**1.075**	**1.337**	**0.86214**	**1.0515**	**1.6047**	**1.6753**
Oxidation Reduction Potential (ORP), Field (mv)	NA	**58.3**	**-88.7**	**238.8**	**-104**	**-59.9**	**168.9**
Turbidity, Field (NTU)	NA	**39.15**	**340.1**	**1.82**	**0.21**	**2.66**	**0.8**
pH, Field (pH units)	NA	**6.96**	**6.84**	**6.61**	**6.52**	**7.18**	**6.6**

NOTES:

CCR: Coal Combustion Residuals.
mg/L: milligram per liter.
pCi/L: picoCurie per liter.
Deg C: Degrees Celsius.
mS/cm: milliSiemen per centimeter
mv: millivolts
NTU: Nephelometric Turbidity Units
NA: not available
U: not detected, value is the laboratory reporting limit.
U: not detected, activity level below the Minimum Detectable Concentration (Radiological).
J: value is estimated.
J+: value is estimated with a potential high bias.
USEPA: United States Environmental Protection Agency.
GWPS: Ground Water Protection Standard.

Results in **bold** are detected.
Shaded values indicate a GWPS exceedance
- USEPA. 2020. Final Rule: Disposal of Coal Combustion Residuals from Electric Utilities. July 26. 40 CFR Part 257. https://www.epa.gov/coalash/coal-ash-rule

Table 2. Trend Summary

Location	Chemical	Units	Identified Trends		Trend Analysis on All Available Data					Trend Analysis on Recent Data				
			Trend (All Data)	Trend (Recent Data)	Results, n	Detected Results, n	Max Concentration	Sen Slope (magnitude per year)	p-value	*Results, n	*Detected Results, n	*Max Concentration	*Sen Slope (magnitude per year)	*p-value
CCR-AP-7	Antimony, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	24	3	0.0025	NA	NA	12	1	0.0025	NA	NA
WAP-1	Antimony, Total	mg/L	Stable	No Trend	20	11	0.002	0	0.26	12	9	0.002	2.23e-05	0.489
WAP-2RR	Antimony, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - Only one detected result.	20	1	0.0025	NA	NA	12	1	0.0025	NA	NA
WAP-3S	Antimony, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - Only one detected result.	20	1	0.0025	NA	NA	12	1	0.0025	NA	NA
WAP-4S	Antimony, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.01	NA	NA	12	0	0.01	NA	NA
WAP-5S	Antimony, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	20	1	0.0025	NA	NA	12	0	0.0025	NA	NA
CCR-AP-7	Arsenic, Total	mg/L	Decreasing	Probably Decreasing	24	24	0.018	-0.000242	0.00678	12	12	0.015	-0.000439	0.0969
WAP-1	Arsenic, Total	mg/L	Stable	Stable	20	20	0.025	-2.25e-05	0.846	12	12	0.025	-2.25e-05	0.945
WAP-2RR	Arsenic, Total	mg/L	Probably Increasing	Probably Increasing	20	18	0.0078	4.1e-05	0.0515	12	11	0.0078	0.000101	0.099
WAP-3S	Arsenic, Total	mg/L	Decreasing	Stable	20	17	0.0064	-0.000149	0.0177	12	9	0.0064	-9.95e-05	0.492
WAP-4S	Arsenic, Total	mg/L	Increasing	Increasing	20	20	0.027	0.000226	0.00252	12	12	0.027	0.00045	0.0457
WAP-5S	Arsenic, Total	mg/L	No Trend	No Trend	20	15	0.005	8.52e-06	0.435	12	8	0.005	8.5e-05	0.336
CCR-AP-7	Barium, Total	mg/L	Decreasing	Probably Decreasing	24	24	0.19	-0.00226	0.00921	12	12	0.19	-0.00449	0.0516
WAP-1	Barium, Total	mg/L	No Trend	Stable	20	20	0.99	0.00207	0.515	12	12	0.99	-0.00861	0.63
WAP-2RR	Barium, Total	mg/L	Stable	No Trend	20	20	0.086	-0.000544	0.435	12	12	0.086	0.00167	0.145
WAP-3S	Barium, Total	mg/L	Decreasing	No Trend	20	20	0.39	-0.0122	0.015	12	12	0.39	-0.00988	0.451
WAP-4S	Barium, Total	mg/L	Decreasing	No Trend	20	20	0.08	-0.000571	0.0265	12	12	0.069	4.55e-05	0.781
WAP-5S	Barium, Total	mg/L	Decreasing	Decreasing	20	20	0.063	-0.000888	0.0002	12	12	0.061	-0.00118	0.0123
CCR-AP-7	Beryllium, Total	mg/L	No Trend	Not Evaluated - Only one detected result.	24	7	0.00075	0	0.422	12	1	0.0005	NA	NA
WAP-1	Beryllium, Total	mg/L	No Trend	No Trend	20	14	0.0012	6.67e-07	0.67	12	7	0.00099	3.08e-05	0.234
WAP-2RR	Beryllium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	20	2	0.0005	NA	NA	12	1	0.0005	NA	NA
WAP-3S	Beryllium, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	20	1	0.0005	NA	NA	12	0	0.0005	NA	NA
WAP-4S	Beryllium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.0005	NA	NA	12	0	0.0005	NA	NA
WAP-5S	Beryllium, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	20	1	0.0005	NA	NA	12	0	0.0005	NA	NA
CCR-AP-7	Cadmium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - No detected results.	24	2	0.0005	NA	NA	12	0	0.0005	NA	NA
WAP-1	Cadmium, Total	mg/L	No Trend	Stable	20	9	0.0005	0	0.475	12	4	0.0005	0	0.68
WAP-2RR	Cadmium, Total	mg/L	Decreasing	Stable	20	18	0.001	-1e-05	0.0175	12	10	0.00053	-1.33e-05	0.301
WAP-3S	Cadmium, Total	mg/L	No Trend	No Trend	20	11	0.0005	0	0.41	12	4	0.0005	0	0.934
WAP-4S	Cadmium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Stable	20	4	0.0005	NA	NA	12	3	0.0005	0	0.524
WAP-5S	Cadmium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	20	2	0.0005	NA	NA	12	2	0.0005	NA	NA
CCR-AP-7	Chromium, Total	mg/L	No Trend	No Trend	24	12	0.019	0	0.723	12	3	0.0062	3.18e-05	0.347
WAP-1	Chromium, Total	mg/L	Stable	Stable	20	20	0.046	-0.000346	0.242	12	12	0.027	-0.000228	0.409
WAP-2RR	Chromium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	20	3	0.0057	NA	NA	12	2	0.0057	NA	NA
WAP-3S	Chromium, Total	mg/L	No Trend	Not Evaluated - Majority of data (>75%) non-detect.	20	5	0.005	0	0.161	12	2	0.005	NA	NA
WAP-4S	Chromium, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	20	1	0.005	NA	NA	12	0	0.005	NA	NA
WAP-5S	Chromium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.005	NA	NA	12	0	0.005	NA	NA
CCR-AP-7	Cobalt, Total	mg/L	Decreasing	No Trend	24	22	0.015	-8.48e-05	0.00631	12	10	0.0049	-4.25e-05	0.492
WAP-1	Cobalt, Total	mg/L	Stable	Stable	20	20	0.019	-0.000192	0.27	12	12	0.012	-0.000133	0.304
WAP-2RR	Cobalt, Total	mg/L	Stable	No Trend	20	20	0.0097	-1.67e-05	0.603	12	12	0.0097	0.000108	0.492
WAP-3S	Cobalt, Total	mg/L	No Trend	No Trend	20	20	0.0018	2.12e-05	0.298	12	12	0.0018	1.43e-06	1
WAP-4S	Cobalt, Total	mg/L	No Trend	Stable	20	20	0.0093	0	0.974	12	12	0.0023	-3.1e-05	0.103
WAP-5S	Cobalt, Total	mg/L	Decreasing	Decreasing	20	20	0.0094	-0.000168	0.00852	12	12	0.0094	-0.000288	0.0392
CCR-AP-7	Fluoride	mg/L	Increasing	Probably Increasing	23	23	0.72	0.00667	0.0212	12	12	0.72	0.03	0.0739
WAP-1	Fluoride	mg/L	No Trend	No Trend	20	20	2	0.00812	0.171	12	12	2	0.0213	0.537
WAP-2RR	Fluoride	mg/L	Increasing	Probably Increasing	20	20	0.4	0.01	0.00163	12	12	0.4	0.01	0.0641

Abbreviations: mg/L = milligrams per liter; n = sample count; pCi/L = picocuries per liter.

Notes: *Recent data defined as the 12 most recent data points. MK = Mann Kendall Trend Test. Identified trends were classified based on Aziz (2003) guidance and Mann-Kendall Trend Test Results. Thiel-Sen slope and p-value evaluated at 95% confidence level to confirm identified trends.

Additional information about trend analysis provided in Attachment A.

			Identified Trends		Trend Analysis on All Available Data					Trend Analysis on Recent Data				
Location	Chemical	Units	Trend (All Data)	Trend (Recent Data)	Results, n	Detected Results, n	Max Concentration	Sen Slope (magnitude per year)	p-value	*Results, n	*Detected Results, n	*Max Concentration	*Sen Slope (magnitude per year)	*p-value
WAP-3S	Fluoride	mg/L	Stable	Stable	20	20	0.77	-0.00396	0.649	12	12	0.76	-0.00875	0.837
WAP-4S	Fluoride	mg/L	No Trend	No Trend	20	20	0.28	0.000455	0.794	12	12	0.28	0.00236	0.782
WAP-5S	Fluoride	mg/L	Stable	No Trend	20	19	0.21	-0.0012	0.435	12	11	0.13	0.00215	0.492
CCR-AP-7	Lead, Total	mg/L	Probably Decreasing	No Trend	24	14	0.02	-3.32e-05	0.0621	12	5	0.006	0	0.506
WAP-1	Lead, Total	mg/L	Stable	No Trend	20	20	0.035	-0.000221	0.475	12	12	0.022	5.56e-05	0.891
WAP-2RR	Lead, Total	mg/L	No Trend	No Trend	20	8	0.0064	0	0.797	12	7	0.0056	2.81e-05	0.225
WAP-3S	Lead, Total	mg/L	No Trend	Stable	20	14	0.0027	9.06e-06	0.556	12	7	0.0027	-4.17e-06	0.726
WAP-4S	Lead, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	No Trend	20	4	0.0015	NA	NA	12	3	0.0015	0	0.217
WAP-5S	Lead, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	20	2	0.0015	NA	NA	12	2	0.0015	NA	NA
CCR-AP-7	Lithium, Total	mg/L	Decreasing	Stable	24	24	0.039	-0.0002	0.00968	12	12	0.02	-0.000333	0.239
WAP-1	Lithium, Total	mg/L	Stable	Stable	20	20	0.027	-0.000229	0.192	12	12	0.021	-0.000386	0.216
WAP-2RR	Lithium, Total	mg/L	Decreasing	No Trend	20	20	0.06	-0.00153	0.00466	12	12	0.041	0.000243	0.783
WAP-3S	Lithium, Total	mg/L	Increasing	Probably Increasing	20	20	0.12	0.00322	5.69e-05	12	12	0.12	0.00187	0.0739
WAP-4S	Lithium, Total	mg/L	Decreasing	Stable	20	13	0.017	-0.0005	0.00248	12	7	0.012	-0.000165	0.175
WAP-5S	Lithium, Total	mg/L	Decreasing	Stable	20	9	0.025	-5e-05	0.0154	12	6	0.0047	-3.1e-05	0.134
CCR-AP-7	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.00025	NA	NA	12	0	0.00025	NA	NA
WAP-1	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.00025	NA	NA	12	0	0.00025	NA	NA
WAP-2RR	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.00025	NA	NA	12	0	0.00025	NA	NA
WAP-3S	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.00025	NA	NA	12	0	0.00025	NA	NA
WAP-4S	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.00025	NA	NA	12	0	0.00025	NA	NA
WAP-5S	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.00025	NA	NA	12	0	0.00025	NA	NA
CCR-AP-7	Molybdenum, Total	mg/L	Decreasing	Stable	24	23	0.013	-0.000227	5.4e-06	12	11	0.0025	-5.56e-06	0.835
WAP-1	Molybdenum, Total	mg/L	Stable	No Trend	20	17	0.0028	-1.29e-05	0.536	12	10	0.0025	4.22e-05	0.269
WAP-2RR	Molybdenum, Total	mg/L	Increasing	No Trend	20	20	0.16	0.00347	0.00515	12	12	0.16	0.00373	0.188
WAP-3S	Molybdenum, Total	mg/L	Decreasing	Stable	20	20	1.5	-0.0306	0.0476	12	12	1.1	-0.0385	0.15
WAP-4S	Molybdenum, Total	mg/L	Increasing	No Trend	20	20	0.58	0.00696	0.00127	12	12	0.58	0.00354	0.367
WAP-5S	Molybdenum, Total	mg/L	Increasing	Increasing	20	14	0.4	3.13e-05	0.00922	12	7	0.0025	0.000172	0.00994
CCR-AP-7	Radium-226 & 228	pCi/L	Stable	Probably Increasing	21	21	1.72	-0.0149	0.487	12	12	1.44	0.0485	0.0641
WAP-1	Radium-226 & 228	pCi/L	Increasing	No Trend	16	16	4.74	0.0468	0.0382	12	12	4.74	0.015	0.537
WAP-2RR	Radium-226 & 228	pCi/L	No Trend	No Trend	17	16	2.15	0.0181	0.387	12	11	2.15	0.0556	0.304
WAP-3S	Radium-226 & 228	pCi/L	No Trend	No Trend	16	16	1.38	0.0128	0.558	12	12	1.38	0.0134	0.837
WAP-4S	Radium-226 & 228	pCi/L	No Trend	No Trend	17	16	1.86	0.0128	0.343	12	11	1.86	0.0193	0.537
WAP-5S	Radium-226 & 228	pCi/L	Increasing	No Trend	17	16	1.49	0.0249	0.032	12	11	1.49	0.035	0.15
CCR-AP-7	Selenium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	22	3	0.0028	NA	NA	12	1	0.0028	NA	NA
WAP-1	Selenium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - No detected results.	18	2	0.0025	NA	NA	12	0	0.0025	NA	NA
WAP-2RR	Selenium, Total	mg/L	No Trend	No Trend	18	7	0.0071	0	0.14	12	7	0.0071	0.00035	0.252
WAP-3S	Selenium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.0025	NA	NA	12	0	0.0025	NA	NA
WAP-4S	Selenium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.0025	NA	NA	12	0	0.0025	NA	NA
WAP-5S	Selenium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.0025	NA	NA	12	0	0.0025	NA	NA
CCR-AP-7	Thallium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - No detected results.	24	4	0.001	NA	NA	12	0	0.001	NA	NA
WAP-1	Thallium, Total	mg/L	No Trend	Probably Increasing	20	12	0.001	4.5e-06	0.207	12	6	0.001	3.79e-05	0.1
WAP-2RR	Thallium, Total	mg/L	Increasing	Probably Increasing	20	10	0.001	1.71e-05	0.00771	12	3	0.001	0	0.0836
WAP-3S	Thallium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.001	NA	NA	12	0	0.001	NA	NA

Abbreviations: mg/L = milligrams per liter; n = sample count; pCi/L = picocuries per liter.

Notes: *Recent data defined as the 12 most recent data points. MK = Mann Kendall Trend Test. Identified trends were classified based on Aziz (2003) guidance and Mann-Kendall Trend Test Results. Thiel-Sen slope and p-value evaluated at 95% confidence level to confirm identified trends.

Additional information about trend analysis provided in Attachment A.

Location	Chemical	Units	Identified Trends		Trend Analysis on All Available Data					Trend Analysis on Recent Data				
			Trend (All Data)	Trend (Recent Data)	Results, n	Detected Results, n	Max Concentration	Sen Slope (magnitude per year)	p-value	*Results, n	*Detected Results, n	*Max Concentration	*Sen Slope (magnitude per year)	*p-value
WAP-4S	Thallium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.001	NA	NA	12	0	0.001	NA	NA
WAP-5S	Thallium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	20	2	0.001	NA	NA	12	1	0.001	NA	NA

Abbreviations: mg/L = milligrams per liter; n = sample count; pCi/L = picocuries per liter.

Notes: *Recent data defined as the 12 most recent data points. MK = Mann Kendall Trend Test. Identified trends were classified based on Aziz (2003) guidance and Mann-Kendall Trend Test Results. Thiel-Sen slope and p-value evaluated at 95% confidence level to confirm identified trends.

Additional information about trend analysis provided in Attachment A.

ATTACHMENT A
Assessment Monitoring Statistical Analysis Summary

Table A-1. Descriptive Statistics

Location	Constituent	Units	n	n, non-detects	percent of non-detects	max	min	mean	median	standard deviation	variance	reporting limit range	date range
CCR-AP-7	Antimony, Total	mg/L	24	21	88	0.0050	0.000160	0.0019421	0.002	8.2e-04	6.8e-07	0.002 - 0.005	2016-06-10 to 2024-05-10
WAP-1	Antimony, Total	mg/L	20	9	45	0.0020	0.000450	0.0014730	0.0019	6.1e-04	3.7e-07	0.002 - 0.002	2018-03-15 to 2024-06-03
WAP-2RR	Antimony, Total	mg/L	20	19	95	0.0050	0.001100	0.0021050	0.002	7.1e-04	5.0e-07	0.002 - 0.005	2018-03-15 to 2024-05-30
WAP-3S	Antimony, Total	mg/L	20	19	95	0.0050	0.000430	0.0020715	0.002	7.7e-04	6.0e-07	0.002 - 0.005	2018-03-15 to 2024-05-30
WAP-4S	Antimony, Total	mg/L	20	20	100	0.0200	0.002000	0.0030500	0.002	4.0e-03	1.6e-05	0.002 - 0.02	2018-03-14 to 2024-05-31
WAP-5S	Antimony, Total	mg/L	20	19	95	0.0050	0.002000	0.0021550	0.002	6.7e-04	4.5e-07	0.002 - 0.005	2018-03-13 to 2024-05-31
CCR-AP-7	Arsenic, Total	mg/L	24	0	0	0.0180	0.000660	0.0056721	0.00515	4.2e-03	1.7e-05	NA	2016-06-10 to 2024-05-10
WAP-1	Arsenic, Total	mg/L	20	0	0	0.0250	0.003200	0.0079700	0.00585	5.9e-03	3.5e-05	NA	2018-03-15 to 2024-06-03
WAP-2RR	Arsenic, Total	mg/L	20	2	10	0.0078	0.000470	0.0018370	0.001	2.0e-03	4.1e-06	0.001 - 0.005	2018-03-15 to 2024-05-30
WAP-3S	Arsenic, Total	mg/L	20	3	15	0.0100	0.000310	0.0029180	0.0025	2.3e-03	5.4e-06	0.005 - 0.01	2018-03-15 to 2024-05-30
WAP-4S	Arsenic, Total	mg/L	20	0	0	0.0270	0.000730	0.0061065	0.0047	5.6e-03	3.1e-05	NA	2018-03-14 to 2024-05-31
WAP-5S	Arsenic, Total	mg/L	20	5	25	0.0100	0.000390	0.0018500	0.00081	2.4e-03	5.8e-06	0.001 - 0.01	2018-03-13 to 2024-05-31
CCR-AP-7	Barium, Total	mg/L	24	0	0	0.1900	0.076000	0.1270000	0.12	2.9e-02	8.2e-04	NA	2016-06-10 to 2024-05-10
WAP-1	Barium, Total	mg/L	20	0	0	0.9900	0.370000	0.5160000	0.46	1.7e-01	2.9e-02	NA	2018-03-15 to 2024-06-03
WAP-2RR	Barium, Total	mg/L	20	0	0	0.0860	0.023000	0.0425500	0.041	1.6e-02	2.7e-04	NA	2018-03-15 to 2024-05-30
WAP-3S	Barium, Total	mg/L	20	0	0	0.3900	0.024000	0.1572000	0.14	1.2e-01	1.5e-02	NA	2018-03-15 to 2024-05-30
WAP-4S	Barium, Total	mg/L	20	0	0	0.0800	0.043000	0.0560000	0.055	8.1e-03	6.5e-05	NA	2018-03-14 to 2024-05-31
WAP-5S	Barium, Total	mg/L	20	0	0	0.0630	0.037000	0.0508500	0.052	7.2e-03	5.2e-05	NA	2018-03-13 to 2024-05-31
CCR-AP-7	Beryllium, Total	mg/L	24	17	71	0.0010	0.000067	0.0007603	0.001	3.7e-04	1.4e-07	0.0005 - 0.001	2016-06-10 to 2024-05-10
WAP-1	Beryllium, Total	mg/L	20	6	30	0.0012	0.000072	0.0006306	0.000545	3.7e-04	1.3e-07	0.0005 - 0.001	2018-03-15 to 2024-06-03
WAP-2RR	Beryllium, Total	mg/L	20	18	90	0.0010	0.000240	0.0009055	0.001	2.3e-04	5.5e-08	0.0005 - 0.001	2018-03-15 to 2024-05-30
WAP-3S	Beryllium, Total	mg/L	20	19	95	0.0010	0.000068	0.0009284	0.001	2.3e-04	5.3e-08	0.0005 - 0.001	2018-03-15 to 2024-05-30
WAP-4S	Beryllium, Total	mg/L	20	20	100	0.0010	0.000500	0.0009750	0.001	1.1e-04	1.2e-08	0.0005 - 0.001	2018-03-14 to 2024-05-31
WAP-5S	Beryllium, Total	mg/L	20	19	95	0.0010	0.000084	0.0009292	0.001	2.3e-04	5.2e-08	0.0005 - 0.001	2018-03-13 to 2024-05-31
CCR-AP-7	Cadmium, Total	mg/L	24	22	92	0.0010	0.000140	0.0009150	0.001	2.4e-04	5.6e-08	0.0005 - 0.001	2016-06-10 to 2024-05-10
WAP-1	Cadmium, Total	mg/L	20	11	55	0.0010	0.000130	0.0006745	0.001	3.8e-04	1.4e-07	0.001 - 0.001	2018-03-15 to 2024-06-03
WAP-2RR	Cadmium, Total	mg/L	20	2	10	0.0010	0.000270	0.0004885	0.000425	2.3e-04	5.5e-08	0.001 - 0.001	2018-03-15 to 2024-05-30
WAP-3S	Cadmium, Total	mg/L	20	9	45	0.0010	0.000110	0.0005650	0.00027	4.1e-04	1.6e-07	0.001 - 0.001	2018-03-15 to 2024-05-30
WAP-4S	Cadmium, Total	mg/L	20	16	80	0.0010	0.000062	0.0008416	0.001	3.3e-04	1.1e-07	0.001 - 0.001	2018-03-14 to 2024-05-31
WAP-5S	Cadmium, Total	mg/L	20	18	90	0.0010	0.000092	0.0009121	0.001	2.7e-04	7.3e-08	0.001 - 0.001	2018-03-13 to 2024-05-31
CCR-AP-7	Chromium, Total	mg/L	24	12	50	0.0190	0.000470	0.0038938	0.002	3.9e-03	1.5e-05	0.002 - 0.01	2016-06-10 to 2024-05-10
WAP-1	Chromium, Total	mg/L	20	0	0	0.0460	0.002200	0.0132850	0.01	1.2e-02	1.5e-04	NA	2018-03-15 to 2024-06-03
WAP-2RR	Chromium, Total	mg/L	20	17	85	0.0057	0.002000	0.0027400	0.002	1.3e-03	1.8e-06	0.002 - 0.005	2018-03-15 to 2024-05-30
WAP-3S	Chromium, Total	mg/L	20	15	75	0.0100	0.000990	0.0027695	0.002	2.0e-03	3.9e-06	0.002 - 0.01	2018-03-15 to 2024-05-30
WAP-4S	Chromium, Total	mg/L	20	19	95	0.0100	0.000880	0.0026440	0.002	2.0e-03	3.9e-06	0.002 - 0.01	2018-03-14 to 2024-05-31
WAP-5S	Chromium, Total	mg/L	20	20	100	0.0100	0.002000	0.0027000	0.002	1.9e-03	3.8e-06	0.002 - 0.01	2018-03-13 to 2024-05-31
CCR-AP-7	Cobalt, Total	mg/L	24	2	8	0.0150	0.000210	0.0021800	0.000935	3.2e-03	1.0e-05	0.0005 - 0.002	2016-06-10 to 2024-05-10
WAP-1	Cobalt, Total	mg/L	20	0	0	0.0190	0.000440	0.0054720	0.0046	5.1e-03	2.6e-05	NA	2018-03-15 to 2024-06-03
WAP-2RR	Cobalt, Total	mg/L	20	0	0	0.0097	0.000520	0.0026355	0.0022	2.1e-03	4.4e-06	NA	2018-03-15 to 2024-05-30
WAP-3S	Cobalt, Total	mg/L	20	0	0	0.0018	0.000340	0.0008935	0.00078	4.4e-04	1.9e-07	NA	2018-03-15 to 2024-05-30
WAP-4S	Cobalt, Total	mg/L	20	0	0	0.0093	0.001300	0.0022000	0.0018	1.7e-03	2.9e-06	NA	2018-03-14 to 2024-05-31
WAP-5S	Cobalt, Total	mg/L	20	0	0	0.0094	0.001600	0.0070700	0.00755	2.0e-03	4.0e-06	NA	2018-03-13 to 2024-05-31
CCR-AP-7	Fluoride	mg/L	23	0	0	0.7200	0.140000	0.3330435	0.3	1.3e-01	1.7e-02	NA	2016-08-12 to 2024-05-10
WAP-1	Fluoride	mg/L	20	0	0	2.0000	0.110000	0.4545000	0.28	4.6e-01	2.1e-01	NA	2018-03-15 to 2024-06-03
WAP-2RR	Fluoride	mg/L	20	0	0	0.4000	0.110000	0.2445000	0.245	8.2e-02	6.8e-03	NA	2018-03-15 to 2024-05-30
WAP-3S	Fluoride	mg/L	20	0	0	0.7700	0.240000	0.5330000	0.54	1.5e-01	2.4e-02	NA	2018-03-15 to 2024-05-30
WAP-4S	Fluoride	mg/L	20	0	0	0.2800	0.110000	0.2050000	0.215	4.4e-02	2.0e-03	NA	2018-03-14 to 2024-05-31
WAP-5S	Fluoride	mg/L	20	1	5	0.2100	0.030000	0.1028000	0.1	3.6e-02	1.3e-03	0.1 - 0.1	2018-03-13 to 2024-05-31
CCR-AP-7	Lead, Total	mg/L	24	10	42	0.0200	0.000130	0.0029113	0.001	4.3e-03	1.9e-05	0.001 - 0.003	2016-06-10 to 2024-05-10
WAP-1	Lead, Total	mg/L	20	0	0	0.0350	0.000680	0.0105840	0.00845	9.6e-03	9.2e-05	NA	2018-03-15 to 2024-06-03
WAP-2RR	Lead, Total	mg/L	20	12	60	0.0064	0.000160	0.0014115	0.001	1.6e-03	2.6e-06	0.001 - 0.001	2018-03-15 to 2024-05-30
WAP-3S	Lead, Total	mg/L	20	6	30	0.0030	0.000230	0.0009665	0.00097	7.5e-04	5.7e-07	0.001 - 0.003	2018-03-15 to 2024-05-30
WAP-4S	Lead, Total	mg/L	20	16	80	0.0030	0.000130	0.0009645	0.001	5.6e-04	3.2e-07	0.001 - 0.003	2018-03-14 to 2024-05-31
WAP-5S	Lead, Total	mg/L	20	18	90	0.0030	0.000200	0.0010280	0.001	5.1e-04	2.6e-07	0.001 - 0.003	2018-03-13 to 2024-05-31
CCR-AP-7	Lithium, Total	mg/L	24	0	0	0.0390	0.007000	0.0133667	0.011	6.7e-03	4.5e-05	NA	2016-06-10 to 2024-05-10
WAP-1	Lithium, Total	mg/L	20	0	0	0.0270	0.004700	0.0121450	0.01	5.9e-03	3.5e-05	NA	2018-03-15 to 2024-06-03
WAP-2RR	Lithium, Total	mg/L	20	0	0	0.0600	0.012000	0.0306500	0.026	1.4e-02	2.0e-04	NA	2018-03-15 to 2024-05-30
WAP-3S	Lithium, Total	mg/L	20	0	0	0.1200	0.033000	0.0730000	0.078	2.4e-02	5.8e-04	NA	2018-03-15 to 2024-05-30
WAP-4S	Lithium, Total	mg/L	20	7	35	0.0170	0.001400	0.0069800	0.005	4.8e-03	2.3e-05	0.005 - 0.008	2018-03-14 to 2024-05-31
WAP-5S	Lithium, Total	mg/L	20	11	55	0.0500	0.001400	0.0073000	0.005	1.0e-02	1.1e-04	0.005 - 0.05	2018-03-13 to 2024-05-31
CCR-AP-7	Mercury, Total	mg/L	21	21	100	0.0005	0.000200	0.0002143	0.0002	6.5e-05	4.3e-09	0.0002 - 0.0005	2016-06-10 to 2024-05-10
WAP-1	Mercury, Total	mg/L	18	18	100	0.0005	0.000200	0.0002167	0.0002	7.1e-05	5.0e-09	0.0002 - 0.0005	2018-03-15 to 2024-06-03
WAP-2RR	Mercury, Total	mg/L	18	18	100	0.0005	0.000200	0.0002167	0.0002	7.1e-05	5.0e-09	0.0002 - 0.0005	2018-03-15 to 2024-05-30
WAP-3S	Mercury, Total	mg/L	18	18	100	0.0005	0.000200	0.0002167	0.0002	7.1e-05	5.0e-09	0.0002 - 0.0005	2018-03-15 to 2024-05-30
WAP-4S	Mercury, Total	mg/L	19	19	100	0.0005	0.000200	0.0002158	0.0002	6.9e-05	4.7e-09	0.0002 - 0.0005	2018-03-14 to 2024-05-31
WAP-5S	Mercury, Total	mg/L	18	18	100	0.0005	0.000200	0.0002167	0.0002	7.1e-05	5.0e-09	0.0002 - 0.0005	2018-03-13 to 2024-05-31
CCR-AP-7	Molybdenum, Total	mg/L	24	1	4	0.0130	0.001100	0.0036667	0.00225	3.0e-03	9.2e-06	0.005 - 0.005	2016-06-10 to 2024-05-10
WAP-1	Molybdenum, Total	mg/L	20	3	15	0.0050	0.000680	0.0019450	0.00135	1.5e-03	2.1e-06	0.005 - 0.005	2018-03-15 to 2024-06-03
WAP-2RR	Molybdenum, Total	mg/L	20	0	0	0.1600	0.013000	0.0616500	0.0565	3.5e-02	1.2e-03	NA	2018-03-15 to 2024-05-30
WAP-3S	Molybdenum, Total	mg/L	20	0	0	1.5000	0.260000	0.8200000	0.82	3.1e-01	9.7e-02	NA	2018-03-15 to 2024-05-30
WAP-4S	Molybdenum, Total	mg/L	20	0	0	0.5800	0.000780	0.4250390	0.455	1.2e-01	1.3e-02	NA	2018-03-14 to 2024-05-31
WAP-5S	Molybdenum, Total	mg/L	20	6	30	0.4000	0.000640	0.0221005	0.00097	8.9e-02	7.9e-03	0.005 - 0.005	2018-03-13 to 2024-05-31
CCR-AP-7	Radium-226 & 228	pCi/L	21	0	0	1.7200	0.126000	0.8474762	0.764	4.5e-01	2.0e-01	NA	2016-06-10 to 2024-05-10
WAP-1	Radium-226 & 228	pCi/L	16	0	0	4.7400	0.480000	1.5026250	1.25	9.9e-01	9.9e-01	NA	2018-04-02 to 2024-06-03
WAP-2RR	Radium-226 & 228	pCi/L	17	1	6	2.1500	0.088300	0.5994882	0.419	5.6e-01	3.1e-01	0.188 - 0.188	2018-03-15 to 2024-05-30
WAP-3S	Radium-226 & 228	pCi/L	16	0	0	1.3800	0.199000	0.8607500	0.95	3.5e-01	1.2e-01	NA	2018-03-15 to 2024-05-30
WAP-4S	Radium-226 & 228	pCi/L	17	1	6	1.8600	0.131000	0.5618824	0.315	4.7e-01	2.2e-01	0.434 - 0.434	2018-03-14 to 2024-05-31
WAP-5S	Radium-226 & 228	pCi/L	17	1	6	1.4900	0.124000	0.4604118	0.361	3.4e-01	1.1e-01	0.124 - 0.124	2018-03-13 to 2024-05-31
CCR-AP-7	Selenium, Total	mg/L	22	19	86	0.0050	0.000350	0.0044945	0.005	1.4e-03	1.9e-06	0.005 - 0.005	2016-06-10 to 2024-05-10
WAP-1	Selenium, Total	mg/L	18	16	89	0.0050	0.001800	0.0046444	0.005	1.0e-03	1.1e-06	0.005 - 0.005	2018-03-15 to 2024-06-03

Location	Constituent	Units	n	n, non-detects	percent of non-detects	max	min	mean	median	standard deviation	variance	reporting limit range	date range
WAP-2RR	Selenium, Total	mg/L	18	11	61	0.0071	0.001400	0.0048389	0.005	1.4e-03	1.9e-06	0.005 - 0.005	2018-03-15 to 2024-05-30
WAP-3S	Selenium, Total	mg/L	18	18	100	0.0050	0.005000	0.0050000	0.005	0.0e+00	0.0e+00	0.005 - 0.005	2018-03-15 to 2024-05-30
WAP-4S	Selenium, Total	mg/L	18	18	100	0.0050	0.005000	0.0050000	0.005	0.0e+00	0.0e+00	0.005 - 0.005	2018-03-14 to 2024-05-31
WAP-5S	Selenium, Total	mg/L	18	18	100	0.0050	0.005000	0.0050000	0.005	0.0e+00	0.0e+00	0.005 - 0.005	2018-03-13 to 2024-05-31
CCR-AP-7	Thallium, Total	mg/L	24	20	83	0.0020	0.000066	0.0009102	0.001	3.9e-04	1.5e-07	0.001 - 0.002	2016-06-10 to 2024-05-10
WAP-1	Thallium, Total	mg/L	20	8	40	0.0020	0.000083	0.0006326	0.0005	4.8e-04	2.3e-07	0.001 - 0.002	2018-03-15 to 2024-06-03
WAP-2RR	Thallium, Total	mg/L	20	10	50	0.0020	0.000067	0.0006446	0.000735	5.2e-04	2.7e-07	0.001 - 0.002	2018-03-15 to 2024-05-30
WAP-3S	Thallium, Total	mg/L	20	20	100	0.0020	0.001000	0.0010500	0.001	2.2e-04	5.0e-08	0.001 - 0.002	2018-03-15 to 2024-05-30
WAP-4S	Thallium, Total	mg/L	20	20	100	0.0020	0.001000	0.0010500	0.001	2.2e-04	5.0e-08	0.001 - 0.002	2018-03-14 to 2024-05-31
WAP-5S	Thallium, Total	mg/L	20	18	90	0.0020	0.000110	0.0009665	0.001	3.5e-04	1.3e-07	0.001 - 0.002	2018-03-13 to 2024-05-31

Table A-2. Results of Shapiro-Wilk Test for Normality

		Shapiro-Wilk Test for Normality (R programming, package = stats, version 4.3.3, function = shapiro.test, non-detects substituted by 0.5*reporting limit)				
Location	**Constituent**	**W statistic**	**p-value**	**Sample Count (n)**	**Non-Detect Count (n)**	**Data Normality (significance level = 0.05)**
CCR-AP-7	Antimony, Total	0.468	2.8e-08	24	21	Not normal
WAP-1	Antimony, Total	0.820	0.0018	20	9	Not normal
WAP-2RR	Antimony, Total	0.258	3.9e-09	20	19	Not normal
WAP-3S	Antimony, Total	0.379	3e-08	20	19	Not normal
WAP-4S	Antimony, Total	NA	NA	20	20	Not Evaluated - All Non-Detect Results
WAP-5S	Antimony, Total	0.363	2.3e-08	20	19	Not normal
CCR-AP-7	Arsenic, Total	0.869	0.0051	24	0	Not normal
WAP-1	Arsenic, Total	0.752	0.00018	20	0	Not normal
WAP-2RR	Arsenic, Total	0.629	6e-06	20	2	Not normal
WAP-3S	Arsenic, Total	0.931	0.16	20	3	Normal
WAP-4S	Arsenic, Total	0.616	4.4e-06	20	0	Not normal
WAP-5S	Arsenic, Total	0.678	2.1e-05	20	5	Not normal
CCR-AP-7	Barium, Total	0.950	0.28	24	0	Normal
WAP-1	Barium, Total	0.780	0.00044	20	0	Not normal
WAP-2RR	Barium, Total	0.901	0.043	20	0	Not normal
WAP-3S	Barium, Total	0.891	0.029	20	0	Not normal
WAP-4S	Barium, Total	0.892	0.029	20	0	Not normal
WAP-5S	Barium, Total	0.962	0.58	20	0	Normal
CCR-AP-7	Beryllium, Total	0.754	5.8e-05	24	17	Not normal
WAP-1	Beryllium, Total	0.911	0.067	20	6	Normal
WAP-2RR	Beryllium, Total	0.443	1e-07	20	18	Not normal
WAP-3S	Beryllium, Total	0.359	2.1e-08	20	19	Not normal
WAP-4S	Beryllium, Total	NA	NA	20	20	Not Evaluated - All Non-Detect Results
WAP-5S	Beryllium, Total	0.361	2.2e-08	20	19	Not normal
CCR-AP-7	Cadmium, Total	0.410	8.4e-09	24	22	Not normal
WAP-1	Cadmium, Total	0.717	6.3e-05	20	11	Not normal
WAP-2RR	Cadmium, Total	0.755	0.0002	20	2	Not normal
WAP-3S	Cadmium, Total	0.774	0.00036	20	9	Not normal
WAP-4S	Cadmium, Total	0.529	5.8e-07	20	16	Not normal
WAP-5S	Cadmium, Total	0.359	2.1e-08	20	18	Not normal
CCR-AP-7	Chromium, Total	0.593	5.2e-07	24	12	Not normal
WAP-1	Chromium, Total	0.765	0.00027	20	0	Not normal
WAP-2RR	Chromium, Total	0.605	3.4e-06	20	17	Not normal
WAP-3S	Chromium, Total	0.679	2.2e-05	20	15	Not normal
WAP-4S	Chromium, Total	0.437	9e-08	20	19	Not normal
WAP-5S	Chromium, Total	NA	NA	20	20	Not Evaluated - All Non-Detect Results
CCR-AP-7	Cobalt, Total	0.602	6.5e-07	24	2	Not normal
WAP-1	Cobalt, Total	0.801	0.00089	20	0	Not normal
WAP-2RR	Cobalt, Total	0.724	7.7e-05	20	0	Not normal
WAP-3S	Cobalt, Total	0.931	0.16	20	0	Normal
WAP-4S	Cobalt, Total	0.408	5.2e-08	20	0	Not normal
WAP-5S	Cobalt, Total	0.882	0.019	20	0	Not normal
CCR-AP-7	Fluoride	0.871	0.0066	23	0	Not normal
WAP-1	Fluoride	0.637	7.2e-06	20	0	Not normal
WAP-2RR	Fluoride	0.972	0.81	20	0	Normal
WAP-3S	Fluoride	0.971	0.78	20	0	Normal
WAP-4S	Fluoride	0.964	0.64	20	0	Normal
WAP-5S	Fluoride	0.921	0.1	20	1	Normal
CCR-AP-7	Lead, Total	0.574	3.2e-07	24	10	Not normal
WAP-1	Lead, Total	0.798	0.00081	20	0	Not normal
WAP-2RR	Lead, Total	0.492	2.7e-07	20	12	Not normal
WAP-3S	Lead, Total	0.763	0.00025	20	6	Not normal
WAP-4S	Lead, Total	0.574	1.6e-06	20	16	Not normal
WAP-5S	Lead, Total	0.399	4.4e-08	20	18	Not normal
CCR-AP-7	Lithium, Total	0.688	7.1e-06	24	0	Not normal
WAP-1	Lithium, Total	0.872	0.013	20	0	Not normal
WAP-2RR	Lithium, Total	0.914	0.076	20	0	Normal
WAP-3S	Lithium, Total	0.972	0.81	20	0	Normal
WAP-4S	Lithium, Total	0.752	0.00018	20	7	Not normal
WAP-5S	Lithium, Total	0.499	3.1e-07	20	11	Not normal
CCR-AP-7	Mercury, Total	NA	NA	21	21	Not Evaluated - All Non-Detect Results
WAP-1	Mercury, Total	NA	NA	18	18	Not Evaluated - All Non-Detect Results
WAP-2RR	Mercury, Total	NA	NA	18	18	Not Evaluated - All Non-Detect Results

Location	Constituent	Shapiro-Wilk Test for Normality (R programming, package = stats, version 4.3.3, function = shapiro.test, non-detects substituted by 0.5*reporting limit) W statistic	p-value	Sample Count (n)	Non-Detect Count (n)	Data Normality (significance level = 0.05)
WAP-3S	Mercury, Total	NA	NA	18	18	Not Evaluated - All Non-Detect Results
WAP-4S	Mercury, Total	NA	NA	19	19	Not Evaluated - All Non-Detect Results
WAP-5S	Mercury, Total	NA	NA	18	18	Not Evaluated - All Non-Detect Results
CCR-AP-7	Molybdenum, Total	0.763	7.7e-05	24	1	Not normal
WAP-1	Molybdenum, Total	0.862	0.0087	20	3	Not normal
WAP-2RR	Molybdenum, Total	0.917	0.088	20	0	Normal
WAP-3S	Molybdenum, Total	0.984	0.98	20	0	Normal
WAP-4S	Molybdenum, Total	0.727	8.5e-05	20	0	Not normal
WAP-5S	Molybdenum, Total	0.243	3e-09	20	6	Not normal
CCR-AP-7	Radium-226 & 228	0.951	0.35	21	0	Normal
WAP-1	Radium-226 & 228	0.707	0.0002	16	0	Not normal
WAP-2RR	Radium-226 & 228	0.827	0.0049	17	1	Not normal
WAP-3S	Radium-226 & 228	0.946	0.43	16	0	Normal
WAP-4S	Radium-226 & 228	0.804	0.0023	17	1	Not normal
WAP-5S	Radium-226 & 228	0.815	0.0032	17	1	Not normal
CCR-AP-7	Selenium, Total	0.393	1.5e-08	22	19	Not normal
WAP-1	Selenium, Total	0.373	7.6e-08	18	16	Not normal
WAP-2RR	Selenium, Total	0.676	4.3e-05	18	11	Not normal
WAP-3S	Selenium, Total	NA	NA	18	18	Not Evaluated - All Non-Detect Results
WAP-4S	Selenium, Total	NA	NA	18	18	Not Evaluated - All Non-Detect Results
WAP-5S	Selenium, Total	NA	NA	18	18	Not Evaluated - All Non-Detect Results
CCR-AP-7	Thallium, Total	0.610	7.9e-07	24	20	Not normal
WAP-1	Thallium, Total	0.890	0.027	20	8	Not normal
WAP-2RR	Thallium, Total	0.836	0.0032	20	10	Not normal
WAP-3S	Thallium, Total	NA	NA	20	20	Not Evaluated - All Non-Detect Results
WAP-4S	Thallium, Total	NA	NA	20	20	Not Evaluated - All Non-Detect Results
WAP-5S	Thallium, Total	0.546	8.5e-07	20	18	Not normal

Table A-3. Results of Rosner/Dixon Test for Outliers

		Rosner or Dixon Test for Outliers (R programming, package = outliers, version 0.15, function = dixon.test or rosnerTest, non-detects substituted by 0.5*reporting limit)							
Location	**Constituent**	**Outlier Test**	**n**	**n, non-detects**	**statistic**	**Alternative Hypothesis**	**p-value**	**Statistical Outlier (significance level = 0.05)**	**Outlier Removed**
CCR-AP-7	Antimony, Total	Dixon	24	21	0.898	highest value 0.0025 is an outlier	0	Yes	No
WAP-1	Antimony, Total	Dixon	20	9	0.472	highest value 0.002 is an outlier	0.07	No	NA
WAP-2RR	Antimony, Total	Dixon	20	19	1.000	highest value 0.0025 is an outlier	0	Yes	No
WAP-3S	Antimony, Total	Dixon	20	19	1.000	highest value 0.0025 is an outlier	0	Yes	No
WAP-4S	Antimony, Total	Dixon	20	20	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-5S	Antimony, Total	Dixon	20	19	1.000	highest value 0.0025 is an outlier	0	Yes	No
CCR-AP-7	Arsenic, Total	Dixon	24	0	0.561	highest value 0.018 is an outlier	0	Yes	No
WAP-1	Arsenic, Total	Dixon	20	0	0.519	highest value 0.025 is an outlier	0.028	Yes	No
WAP-2RR	Arsenic, Total	Dixon	20	2	0.675	highest value 0.0078 is an outlier	0	Yes	No
WAP-3S	Arsenic, Total	Dixon	20	3	0.452	highest value 0.0064 is an outlier	0.097	No	NA
WAP-4S	Arsenic, Total	Dixon	20	0	0.628	highest value 0.027 is an outlier	0	Yes	No
WAP-5S	Arsenic, Total	Dixon	20	5	0.556	highest value 0.005 is an outlier	0.012	Yes	No
CCR-AP-7	Barium, Total	Dixon	24	0	0.333	highest value 0.19 is an outlier	0.31	No	NA
WAP-1	Barium, Total	Dixon	20	0	0.508	highest value 0.99 is an outlier	0.035	Yes	No
WAP-2RR	Barium, Total	Dixon	20	0	0.393	highest value 0.086 is an outlier	0.22	No	NA
WAP-3S	Barium, Total	Dixon	20	0	0.167	highest value 0.39 is an outlier	0.64	No	NA
WAP-4S	Barium, Total	Dixon	20	0	0.548	highest value 0.08 is an outlier	0.015	Yes	No
WAP-5S	Barium, Total	Dixon	20	0	0.292	lowest value 0.037 is an outlier	0.62	No	NA
CCR-AP-7	Beryllium, Total	Dixon	24	17	0.192	lowest value 0.000067 is an outlier	0.94	No	NA
WAP-1	Beryllium, Total	Dixon	20	6	0.309	highest value 0.0012 is an outlier	0.53	No	NA
WAP-2RR	Beryllium, Total	Dixon	20	18	0.500	lowest value 0.00024 is an outlier	0.042	Yes	No
WAP-3S	Beryllium, Total	Dixon	20	19	1.000	lowest value 0.000068 is an outlier	0	Yes	No
WAP-4S	Beryllium, Total	Dixon	20	20	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-5S	Beryllium, Total	Dixon	20	19	1.000	lowest value 0.000084 is an outlier	0	Yes	No
CCR-AP-7	Cadmium, Total	Dixon	24	22	0.500	lowest value 0.00014 is an outlier	0.019	Yes	No
WAP-1	Cadmium, Total	Dixon	20	11	0.216	lowest value 0.00013 is an outlier	0.94	No	NA
WAP-2RR	Cadmium, Total	Dixon	20	2	0.671	highest value 0.001 is an outlier	0	Yes	No
WAP-3S	Cadmium, Total	Dixon	20	9	0.154	lowest value 0.00011 is an outlier	0.56	No	NA
WAP-4S	Cadmium, Total	Dixon	20	16	0.429	lowest value 0.000062 is an outlier	0.14	No	NA
WAP-5S	Cadmium, Total	Dixon	20	18	1.000	lowest value 0.000092 is an outlier	0	Yes	No
CCR-AP-7	Chromium, Total	Dixon	24	12	0.717	highest value 0.019 is an outlier	0	Yes	No
WAP-1	Chromium, Total	Dixon	20	0	0.448	highest value 0.046 is an outlier	0.1	No	NA
WAP-2RR	Chromium, Total	Dixon	20	17	0.681	highest value 0.0057 is an outlier	0	Yes	No
WAP-3S	Chromium, Total	Dixon	20	15	0.525	highest value 0.005 is an outlier	0.025	Yes	No
WAP-4S	Chromium, Total	Dixon	20	19	0.625	highest value 0.005 is an outlier	0	Yes	No
WAP-5S	Chromium, Total	Dixon	20	20	All results are non-detect	Not Evaluated	NA	NA	NA
CCR-AP-7	Cobalt, Total	Dixon	24	2	0.659	highest value 0.015 is an outlier	0	Yes	No
WAP-1	Cobalt, Total	Dixon	20	0	0.395	highest value 0.019 is an outlier	0.21	No	NA
WAP-2RR	Cobalt, Total	Dixon	20	0	0.595	highest value 0.0097 is an outlier	0	Yes	No
WAP-3S	Cobalt, Total	Dixon	20	0	0.219	highest value 0.0018 is an outlier	0.96	No	NA
WAP-4S	Cobalt, Total	Dixon	20	0	0.886	highest value 0.0093 is an outlier	0	Yes	No
WAP-5S	Cobalt, Total	Dixon	20	0	0.370	lowest value 0.0016 is an outlier	0.29	No	NA
CCR-AP-7	Fluoride	Dixon	23	0	0.460	highest value 0.72 is an outlier	0.051	No	NA
WAP-1	Fluoride	Dixon	20	0	0.552	highest value 2 is an outlier	0.013	Yes	No
WAP-2RR	Fluoride	Dixon	20	0	0.200	highest value 0.4 is an outlier	0.84	No	NA
WAP-3S	Fluoride	Dixon	20	0	0.176	lowest value 0.24 is an outlier	0.7	No	NA
WAP-4S	Fluoride	Dixon	20	0	0.357	lowest value 0.11 is an outlier	0.34	No	NA
WAP-5S	Fluoride	Dixon	20	1	0.548	highest value 0.21 is an outlier	0.015	Yes	No
CCR-AP-7	Lead, Total	Dixon	24	10	0.605	highest value 0.02 is an outlier	0	Yes	No
WAP-1	Lead, Total	Dixon	20	0	0.399	highest value 0.035 is an outlier	0.21	No	NA
WAP-2RR	Lead, Total	Dixon	20	12	0.769	highest value 0.0064 is an outlier	0	Yes	No
WAP-3S	Lead, Total	Dixon	20	6	0.500	highest value 0.0027 is an outlier	0.042	Yes	No
WAP-4S	Lead, Total	Dixon	20	16	0.840	highest value 0.0015 is an outlier	0	Yes	No
WAP-5S	Lead, Total	Dixon	20	18	1.000	highest value 0.0015 is an outlier	0	Yes	No

Rosner or Dixon Test for Outliers (R programming, package = outliers, version 0.15, function = dixon.test or rosnerTest, non-detects substituted by 0.5*reporting limit)									
Location	**Constituent**	**Outlier Test**	**n**	**n, non-detects**	**statistic**	**Alternative Hypothesis**	**p-value**	**Statistical Outlier (significance level = 0.05)**	**Outlier Removed**
CCR-AP-7	Lithium, Total	Dixon	24	0	0.635	highest value 0.039 is an outlier	0	Yes	No
WAP-1	Lithium, Total	Dixon	20	0	0.294	highest value 0.027 is an outlier	0.6	No	NA
WAP-2RR	Lithium, Total	Dixon	20	0	0.182	highest value 0.06 is an outlier	0.73	No	NA
WAP-3S	Lithium, Total	Dixon	20	0	0.250	highest value 0.12 is an outlier	0.86	No	NA
WAP-4S	Lithium, Total	Dixon	20	7	0.207	highest value 0.017 is an outlier	0.88	No	NA
WAP-5S	Lithium, Total	Dixon	20	11	0.867	highest value 0.025 is an outlier	0	Yes	No
CCR-AP-7	Mercury, Total	Dixon	21	21	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-1	Mercury, Total	Dixon	18	18	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-2RR	Mercury, Total	Dixon	18	18	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-3S	Mercury, Total	Dixon	18	18	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-4S	Mercury, Total	Dixon	19	19	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-5S	Mercury, Total	Dixon	18	18	All results are non-detect	Not Evaluated	NA	NA	NA
CCR-AP-7	Molybdenum, Total	Dixon	24	1	0.414	highest value 0.013 is an outlier	0.099	No	NA
WAP-1	Molybdenum, Total	Dixon	20	3	0.098	highest value 0.0028 is an outlier	0.26	No	NA
WAP-2RR	Molybdenum, Total	Dixon	20	0	0.469	highest value 0.16 is an outlier	0.074	No	NA
WAP-3S	Molybdenum, Total	Dixon	20	0	0.283	highest value 1.5 is an outlier	0.67	No	NA
WAP-4S	Molybdenum, Total	Dixon	20	0	0.659	lowest value 0.00078 is an outlier	0	Yes	No
WAP-5S	Molybdenum, Total	Dixon	20	6	0.995	highest value 0.4 is an outlier	0	Yes	No
CCR-AP-7	Radium-226 & 228	Dixon	21	0	0.215	highest value 1.72 is an outlier	0.97	No	NA
WAP-1	Radium-226 & 228	Dixon	16	0	0.652	highest value 4.74 is an outlier	0.00034	Yes	No
WAP-2RR	Radium-226 & 228	Dixon	17	1	0.554	highest value 2.15 is an outlier	0.031	Yes	No
WAP-3S	Radium-226 & 228	Dixon	16	0	0.189	lowest value 0.199 is an outlier	0.62	No	NA
WAP-4S	Radium-226 & 228	Dixon	17	1	0.467	highest value 1.86 is an outlier	0.14	No	NA
WAP-5S	Radium-226 & 228	Dixon	17	1	0.549	highest value 1.49 is an outlier	0.034	Yes	No
CCR-AP-7	Selenium, Total	Dixon	22	19	1.000	lowest value 0.00035 is an outlier	0	Yes	No
WAP-1	Selenium, Total	Dixon	18	16	1.000	lowest value 0.0018 is an outlier	0	Yes	No
WAP-2RR	Selenium, Total	Dixon	18	11	0.261	highest value 0.0071 is an outlier	0.89	No	NA
WAP-3S	Selenium, Total	Dixon	18	18	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-4S	Selenium, Total	Dixon	18	18	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-5S	Selenium, Total	Dixon	18	18	All results are non-detect	Not Evaluated	NA	NA	NA
CCR-AP-7	Thallium, Total	Dixon	24	20	0.548	highest value 0.001 is an outlier	0.001	Yes	No
WAP-1	Thallium, Total	Dixon	20	8	0.573	highest value 0.001 is an outlier	0.0059	Yes	No
WAP-2RR	Thallium, Total	Dixon	20	10	0.546	highest value 0.001 is an outlier	0.016	Yes	No
WAP-3S	Thallium, Total	Dixon	20	20	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-4S	Thallium, Total	Dixon	20	20	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-5S	Thallium, Total	Dixon	20	18	1.000	highest value 0.001 is an outlier	0	Yes	No

Table A-4. Results of Mann Kendall and Thiel Sen Trend Tests

		Mann Kendall Trends		Secular Trend Evaluation for All Data										Secular Trend Evaluation for Recent Data (subset of 12 most recent data points)									
				Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)							Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)			Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)								Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)		
Location	Constituent	Trends, All Data	Trends, Recent Data	n	n, detected results	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	p-value	MK Trend Confirmed	n	n, detected results	recent data date range	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	p-value	MK Trend Confirmed
CCR-AP-7	Antimony, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	24	3	0.367	NA	NA	NA	NA	NA	NA	NA	12	1	2019-10-23 to 2024-05-10	0.396	NA	NA	NA	NA	NA	NA	NA
WAP-1	Antimony, Total	Stable	No Trend	20	11	0.351	-0.199	0.26	74	-34	0	0.26	No Trend	12	9	2018-12-05 to 2024-06-03	0.408	0.171	0.489	51.1	11	0.0000223	0.489	No Trend
WAP-2RR	Antimony, Total	Not Evaluated - Only one detected result.	Not Evaluated - Only one detected result.	20	1	0.31	NA	NA	NA	NA	NA	NA	NA	12	1	2018-12-05 to 2024-05-30	0.381	NA	NA	NA	NA	NA	NA	NA
WAP-3S	Antimony, Total	Not Evaluated - Only one detected result.	Not Evaluated - Only one detected result.	20	1	0.349	NA	NA	NA	NA	NA	NA	NA	12	1	2018-12-05 to 2024-05-30	0.443	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Antimony, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	1.33	NA	NA	NA	NA	NA	NA	NA	12	0	2018-12-04 to 2024-05-31	1.38	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Antimony, Total	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	20	1	0.359	NA	NA	NA	NA	NA	NA	NA	12	0	2018-12-04 to 2024-05-31	0.385	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Arsenic, Total	Decreasing	Probably Decreasing	24	24	0.733	-0.401	0.00678	99.3	-110	-0.000242	0.00678	Trend confirmed	12	12	2019-10-23 to 2024-05-10	0.928	-0.388	0.0969	90.3	-25	-0.000439	0.0969	No Trend
WAP-1	Arsenic, Total	Stable	Stable	20	20	0.745	-0.0369	0.846	15.4	-7	-0.0000225	0.846	No Trend	12	12	2018-12-05 to 2024-06-03	0.804	-0.0303	0.945	5.5	-2	-0.0000225	0.945	No Trend
WAP-2RR	Arsenic, Total	Probably Increasing	Probably Increasing	20	18	1.13	0.322	0.0515	94.8	61	0.000041	0.0515	No Trend	12	11	2018-12-05 to 2024-05-30	1.07	0.382	0.099	90.1	25	0.000101	0.099	No Trend
WAP-3S	Arsenic, Total	Decreasing	Stable	20	17	0.623	-0.392	0.0177	98.2	-74	-0.000149	0.0177	Trend confirmed	12	9	2018-12-05 to 2024-05-30	0.862	-0.168	0.492	50.8	-11	-0.0000995	0.492	No Trend
WAP-4S	Arsenic, Total	Increasing	Increasing	20	20	0.918	0.497	0.00252	99.7	94	0.000226	0.00252	Trend confirmed	12	12	2018-12-04 to 2024-05-31	0.84	0.462	0.0457	95.4	30	0.00045	0.0457	Trend confirmed
WAP-5S	Arsenic, Total	No Trend	No Trend	20	15	0.994	0.133	0.435	56.5	25	0.00000852	0.435	No Trend	12	8	2018-12-04 to 2024-05-31	0.958	0.229	0.336	66.4	15	0.000085	0.336	No Trend
CCR-AP-7	Barium, Total	Decreasing	Probably Decreasing	24	24	0.226	-0.397	0.00921	99.1	-105	-0.00226	0.00921	Trend confirmed	12	12	2019-10-23 to 2024-05-10	0.257	-0.457	0.0516	94.8	-29	-0.00449	0.0516	No Trend
WAP-1	Barium, Total	No Trend	Stable	20	20	0.328	0.112	0.515	48.5	21	0.00207	0.515	No Trend	12	12	2018-12-05 to 2024-06-03	0.322	-0.123	0.63	37	-8	-0.00861	0.63	No Trend
WAP-2RR	Barium, Total	Stable	No Trend	20	20	0.386	-0.133	0.435	56.5	-25	-0.000544	0.435	No Trend	12	12	2018-12-05 to 2024-05-30	0.483	0.344	0.145	85.5	22	0.00167	0.145	No Trend
WAP-3S	Barium, Total	Decreasing	No Trend	20	20	0.783	-0.4	0.015	98.5	-76	-0.0122	0.015	Trend confirmed	12	12	2018-12-05 to 2024-05-30	1.1	-0.182	0.451	54.9	-12	-0.00988	0.451	No Trend
WAP-4S	Barium, Total	Decreasing	No Trend	20	20	0.144	-0.372	0.0265	97.4	-69	-0.000571	0.0265	Trend confirmed	12	12	2018-12-04 to 2024-05-31	0.118	0.0788	0.781	21.9	5	0.0000455	0.781	No Trend
WAP-5S	Barium, Total	Decreasing	Decreasing	20	20	0.142	-0.62	0.0002	100	-115	-0.000888	0.0002	Trend confirmed	12	12	2018-12-04 to 2024-05-31	0.141	-0.583	0.0123	98.8	-37	-0.00118	0.0123	Trend confirmed
CCR-AP-7	Beryllium, Total	No Trend	Not Evaluated - Only one detected result.	24	7	0.404	0.135	0.422	57.8	28	0	0.422	No Trend	12	1	2019-10-23 to 2024-05-10	0.203	NA	NA	NA	NA	NA	NA	NA
WAP-1	Beryllium, Total	No Trend	No Trend	20	14	0.606	0.0757	0.67	33	14	0.000000667	0.67	No Trend	12	7	2018-12-05 to 2024-06-03	0.578	0.286	0.234	76.6	18	0.0000308	0.234	No Trend
WAP-2RR	Beryllium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	20	2	0.174	NA	NA	NA	NA	NA	NA	NA	12	1	2018-12-05 to 2024-05-30	0.167	NA	NA	NA	NA	NA	NA	NA
WAP-3S	Beryllium, Total	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	20	1	0.234	NA	NA	NA	NA	NA	NA	NA	12	0	2018-12-05 to 2024-05-30	0.151	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Beryllium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.115	NA	NA	NA	NA	NA	NA	NA	12	0	2018-12-04 to 2024-05-31	0.151	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Beryllium, Total	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	20	1	0.227	NA	NA	NA	NA	NA	NA	NA	12	0	2018-12-04 to 2024-05-31	0.151	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Cadmium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - No detected results.	24	2	0.199	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-23 to 2024-05-10	0.151	NA	NA	NA	NA	NA	NA	NA
WAP-1	Cadmium, Total	No Trend	Stable	20	9	0.346	0.131	0.475	52.5	21	0	0.475	No Trend	12	4	2018-12-05 to 2024-06-03	0.288	-0.12	0.68	32	-6	0	0.68	No Trend
WAP-2RR	Cadmium, Total	Decreasing	Stable	20	18	0.357	-0.396	0.0175	98.2	-74	-0.00001	0.0175	Trend confirmed	12	10	2018-12-05 to 2024-05-30	0.236	-0.246	0.301	69.9	-16	-0.0000133	0.301	No Trend
WAP-3S	Cadmium, Total	No Trend	No Trend	20	11	0.449	0.15	0.41	59	25	0	0.41	No Trend	12	4	2018-12-05 to 2024-05-30	0.411	0.0399	0.934	6.6	2	0	0.934	No Trend
WAP-4S	Cadmium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Stable	20	4	0.291	NA	NA	NA	NA	NA	NA	NA	12	3	2018-12-04 to 2024-05-31	0.356	-0.18	0.524	47.6	-8	0	0.524	No Trend
WAP-5S	Cadmium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	20	2	0.253	NA	NA	NA	NA	NA	NA	NA	12	2	2018-12-04 to 2024-05-31	0.339	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Chromium, Total	No Trend	No Trend	24	12	1.26	0.0579	0.723	27.7	15	0	0.723	No Trend	12	3	2019-10-23 to 2024-05-10	0.745	0.239	0.347	65.3	14	0.0000318	0.347	No Trend
WAP-1	Chromium, Total	Stable	Stable	20	20	0.925	-0.196	0.242	75.8	-37	-0.000346	0.242	No Trend	12	12	2018-12-05 to 2024-06-03	0.716	-0.198	0.409	59.1	-13	-0.000228	0.409	No Trend
WAP-2RR	Chromium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	20	3	0.762	NA	NA	NA	NA	NA	NA	NA	12	2	2018-12-05 to 2024-05-30	0.75	NA	NA	NA	NA	NA	NA	NA

Note:
Mann Kendall Trends are classified based on Aziz (2003) guidance. Thiel-Sen test results are interpreted based on 5% signficance level (95% confidence level). Any group with a p-value < 0.05 is considered a statistically significant trend. The direction of trend is based on the sen slope (positive slope = increasing trend; negative slope = decreasing trend).

		Mann Kendall Trends		Secular Trend Evaluation for All Data										Secular Trend Evaluation for Recent Data (subset of 12 most recent data points)									
				Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)							Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)			Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)								Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)		
Location	Constituent	Trends, All Data	Trends, Recent Data	n	n, detected results	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	p-value	MK Trend Confirmed	n	n, detected results	recent data date range	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	p-value	MK Trend Confirmed
WAP-3S	Chromium, Total	No Trend	Not Evaluated - Majority of data (>75%) non-detect.	20	5	0.649	0.255	0.161	83.9	39	0	0.161	No Trend	12	2	2018-12-05 to 2024-05-30	0.675	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Chromium, Total	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	20	1	0.727	NA	NA	NA	NA	NA	NA	NA	12	0	2018-12-04 to 2024-05-31	0.772	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Chromium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.722	NA	NA	NA	NA	NA	NA	NA	12	0	2018-12-04 to 2024-05-31	0.772	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Cobalt, Total	Decreasing	No Trend	24	22	1.51	-0.404	0.00631	99.4	-111	-0.0000848	0.00631	Trend confirmed	12	10	2019-10-23 to 2024-05-10	1.32	-0.168	0.492	50.8	-11	-0.0000425	0.492	No Trend
WAP-1	Cobalt, Total	Stable	Stable	20	20	0.933	-0.185	0.27	73	-35	-0.000192	0.27	No Trend	12	12	2018-12-05 to 2024-06-03	0.77	-0.242	0.304	69.6	-16	-0.000133	0.304	No Trend
WAP-2RR	Cobalt, Total	Stable	No Trend	20	20	0.794	-0.0907	0.603	39.7	-17	-0.0000167	0.603	No Trend	12	12	2018-12-05 to 2024-05-30	0.942	0.168	0.492	50.8	11	0.000108	0.492	No Trend
WAP-3S	Cobalt, Total	No Trend	No Trend	20	20	0.492	0.175	0.298	70.2	33	0.0000212	0.298	No Trend	12	12	2018-12-05 to 2024-05-30	0.403	0.0153	1	0	1	0.00000143	1	No Trend
WAP-4S	Cobalt, Total	No Trend	Stable	20	20	0.774	0.0109	0.974	2.6	2	0	0.974	No Trend	12	12	2018-12-04 to 2024-05-31	0.119	-0.395	0.103	89.7	-24	-0.000031	0.103	No Trend
WAP-5S	Cobalt, Total	Decreasing	Decreasing	20	20	0.283	-0.434	0.00852	99.1	-82	-0.000168	0.00852	Trend confirmed	12	12	2018-12-04 to 2024-05-31	0.247	-0.473	0.0392	96.1	-31	-0.000288	0.0392	Trend confirmed
CCR-AP-7	Fluoride	Increasing	Probably Increasing	23	23	0.389	0.353	0.0212	97.9	88	0.00667	0.0212	Trend confirmed	12	12	2019-10-23 to 2024-05-10	0.426	0.412	0.0739	92.6	27	0.03	0.0739	No Trend
WAP-1	Fluoride	No Trend	No Trend	20	20	1	0.231	0.171	82.9	43	0.00812	0.171	No Trend	12	12	2018-12-05 to 2024-06-03	0.962	0.152	0.537	46.3	10	0.0213	0.537	No Trend
WAP-2RR	Fluoride	Increasing	Probably Increasing	20	20	0.336	0.519	0.00163	99.8	98	0.01	0.00163	Trend confirmed	12	12	2018-12-05 to 2024-05-30	0.198	0.424	0.0641	93.6	28	0.01	0.0641	No Trend
WAP-3S	Fluoride	Stable	Stable	20	20	0.291	-0.0792	0.649	35.1	-15	-0.00396	0.649	No Trend	12	12	2018-12-05 to 2024-05-30	0.328	-0.0606	0.837	16.3	-4	-0.00875	0.837	No Trend
WAP-4S	Fluoride	No Trend	No Trend	20	20	0.216	0.0485	0.794	20.6	9	0.000455	0.794	No Trend	12	12	2018-12-04 to 2024-05-31	0.192	0.0775	0.782	21.8	5	0.00236	0.782	No Trend
WAP-5S	Fluoride	Stable	No Trend	20	19	0.374	-0.133	0.435	56.5	-25	-0.0012	0.435	No Trend	12	11	2018-12-04 to 2024-05-31	0.326	0.168	0.492	50.8	11	0.00215	0.492	No Trend
CCR-AP-7	Lead, Total	Probably Decreasing	No Trend	24	14	1.67	-0.289	0.0621	93.8	-74	-0.0000332	0.0621	No Trend	12	5	2019-10-23 to 2024-05-10	1.32	-0.174	0.506	49.4	-10	0	0.506	No Trend
WAP-1	Lead, Total	Stable	No Trend	20	20	0.908	-0.121	0.475	52.5	-23	-0.000221	0.475	No Trend	12	12	2018-12-05 to 2024-06-03	0.706	0.0458	0.891	10.9	3	0.0000556	0.891	No Trend
WAP-2RR	Lead, Total	No Trend	No Trend	20	8	1.54	0.0521	0.797	20.3	8	0	0.797	No Trend	12	7	2018-12-05 to 2024-05-30	1.47	0.296	0.225	77.5	18	0.0000281	0.225	No Trend
WAP-3S	Lead, Total	No Trend	Stable	20	14	0.805	0.103	0.556	44.4	19	0.00000906	0.556	No Trend	12	7	2018-12-05 to 2024-05-30	0.764	-0.0953	0.726	27.4	-6	-0.00000417	0.726	No Trend
WAP-4S	Lead, Total	Not Evaluated - Majority of data (>75%) non-detect.	No Trend	20	4	0.514	NA	NA	NA	NA	NA	NA	NA	12	3	2018-12-04 to 2024-05-31	0.676	0.319	0.217	78.3	16	0	0.217	No Trend
WAP-5S	Lead, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	20	2	0.454	NA	NA	NA	NA	NA	NA	NA	12	2	2018-12-04 to 2024-05-31	0.574	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Lithium, Total	Decreasing	Stable	24	24	0.502	-0.394	0.00968	99	-104	-0.0002	0.00968	Trend confirmed	12	12	2019-10-23 to 2024-05-10	0.351	-0.281	0.239	76.1	-18	-0.000333	0.239	No Trend
WAP-1	Lithium, Total	Stable	Stable	20	20	0.487	-0.22	0.192	80.8	-41	-0.000229	0.192	No Trend	12	12	2018-12-05 to 2024-06-03	0.421	-0.29	0.216	78.4	-19	-0.000386	0.216	No Trend
WAP-2RR	Lithium, Total	Decreasing	No Trend	20	20	0.462	-0.468	0.00466	99.5	-88	-0.00153	0.00466	Trend confirmed	12	12	2018-12-05 to 2024-05-30	0.355	0.0763	0.783	21.7	5	0.000243	0.783	No Trend
WAP-3S	Lithium, Total	Increasing	Probably Increasing	20	20	0.33	0.66	0.000057	100	125	0.00322	0.0000569	Trend confirmed	12	12	2018-12-05 to 2024-05-30	0.248	0.412	0.0739	92.6	27	0.00187	0.0739	No Trend
WAP-4S	Lithium, Total	Decreasing	Stable	20	13	0.87	-0.515	0.00248	99.8	-92	-0.0005	0.00248	Trend confirmed	12	7	2018-12-04 to 2024-05-31	0.787	-0.329	0.175	82.5	-20	-0.000165	0.175	No Trend
WAP-5S	Lithium, Total	Decreasing	Stable	20	9	1.2	-0.421	0.0154	98.5	-72	-0.00005	0.0154	Trend confirmed	12	6	2018-12-04 to 2024-05-31	0.339	-0.362	0.134	86.6	-22	-0.000031	0.134	No Trend
CCR-AP-7	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.306	NA	NA	NA	NA	NA	NA	NA	12	0	2018-06-11 to 2024-05-10	0.385	NA	NA	NA	NA	NA	NA	NA
WAP-1	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.326	NA	NA	NA	NA	NA	NA	NA	12	0	2018-07-25 to 2024-06-03	0.385	NA	NA	NA	NA	NA	NA	NA
WAP-2RR	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.326	NA	NA	NA	NA	NA	NA	NA	12	0	2018-07-26 to 2024-05-30	0.385	NA	NA	NA	NA	NA	NA	NA
WAP-3S	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.326	NA	NA	NA	NA	NA	NA	NA	12	0	2018-07-26 to 2024-05-30	0.385	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.319	NA	NA	NA	NA	NA	NA	NA	12	0	2018-08-16 to 2024-05-31	0.385	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0.326	NA	NA	NA	NA	NA	NA	NA	12	0	2018-07-25 to 2024-05-31	0.385	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Molybdenum, Total	Decreasing	Stable	24	23	0.848	-0.674	0.0000054	100	-184	-0.000227	0.0000054	Trend confirmed	12	11	2019-10-23 to 2024-05-10	0.233	-0.0625	0.835	16.5	-4	-0.00000556	0.835	No Trend
WAP-1	Molybdenum, Total	Stable	No Trend	20	17	0.48	-0.107	0.536	46.4	-20	-0.0000129	0.536	No Trend	12	10	2018-12-05 to 2024-06-03	0.461	0.264	0.269	73.1	17	0.0000422	0.269	No Trend
WAP-2RR	Molybdenum, Total	Increasing	No Trend	20	20	0.56	0.464	0.00515	99.5	87	0.00347	0.00515	Trend confirmed	12	12	2018-12-05 to 2024-05-30	0.44	0.313	0.188	81.2	20	0.00373	0.188	No Trend
WAP-3S	Molybdenum, Total	Decreasing	Stable	20	20	0.379	-0.328	0.0476	95.2	-62	-0.0306	0.0476	Trend confirmed	12	12	2018-12-05 to 2024-05-30	0.357	-0.333	0.15	85	-22	-0.0385	0.15	No Trend
WAP-4S	Molybdenum, Total	Increasing	No Trend	20	20	0.273	0.535	0.00127	99.9	100	0.00696	0.00127	Trend confirmed	12	12	2018-12-04 to 2024-05-31	0.123	0.219	0.367	63.3	14	0.00354	0.367	No Trend
WAP-5S	Molybdenum, Total	Increasing	Increasing	20	14	4.17	0.44	0.00922	99.1	80	0.0000313	0.00922	Trend confirmed	12	7	2018-12-04 to 2024-05-31	0.531	0.614	0.00994	99	37	0.000172	0.00994	Trend confirmed
CCR-AP-7	Radium-226 & 228	Stable	Probably Increasing	21	21	0.533	-0.114	0.487	51.3	-24	-0.0149	0.487	No Trend	12	12	2019-10-23 to 2024-05-10	0.599	0.424	0.0641	93.6	28	0.0485	0.0641	No Trend
WAP-1	Radium-226 & 228	Increasing	No Trend	16	16	0.661	0.393	0.0382	96.2	47	0.0468	0.0382	Trend confirmed	12	12	2018-12-05 to 2024-06-03	0.617	0.152	0.537	46.3	10	0.015	0.537	No Trend

Note:
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				Secular Trend Evaluation for All Data										Secular Trend Evaluation for Recent Data (subset of 12 most recent data points)									
				Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)							Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)			Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)								Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)		
Location	Constituent	Mann Kendall Trends		n	n, detected results	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	p-value	MK Trend Confirmed	n	n, detected results	recent data date range	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	p-value	MK Trend Confirmed
WAP-2RR	Radium-226 & 228	No Trend	No Trend	17	16	0.944	0.162	0.387	61.3	22	0.0181	0.387	No Trend	12	11	2018-12-05 to 2024-05-30	0.98	0.242	0.304	69.6	16	0.0556	0.304	No Trend
WAP-3S	Radium-226 & 228	No Trend	No Trend	16	16	0.407	0.117	0.558	44.2	14	0.0128	0.558	No Trend	12	12	2018-12-05 to 2024-05-30	0.389	0.0606	0.837	16.3	4	0.0134	0.837	No Trend
WAP-4S	Radium-226 & 228	No Trend	No Trend	17	16	0.87	0.176	0.343	65.7	24	0.0128	0.343	No Trend	12	11	2018-12-04 to 2024-05-31	0.885	0.152	0.537	46.3	10	0.0193	0.537	No Trend
WAP-5S	Radium-226 & 228	Increasing	No Trend	17	16	0.75	0.391	0.032	96.8	53	0.0249	0.032	Trend confirmed	12	11	2018-12-04 to 2024-05-31	0.715	0.333	0.15	85	22	0.035	0.15	No Trend
CCR-AP-7	Selenium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	22	3	0.252	NA	NA	NA	NA	NA	NA	NA	12	1	2018-08-28 to 2024-05-10	0.0343	NA	NA	NA	NA	NA	NA	NA
WAP-1	Selenium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - No detected results.	18	2	0.0935	NA	NA	NA	NA	NA	NA	NA	12	0	2018-07-25 to 2024-06-03	0	NA	NA	NA	NA	NA	NA	NA
WAP-2RR	Selenium, Total	No Trend	No Trend	18	7	0.516	0.287	0.14	86	35	0	0.14	No Trend	12	7	2018-07-26 to 2024-05-30	0.537	0.282	0.252	74.8	17	0.00035	0.252	No Trend
WAP-3S	Selenium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0	NA	NA	NA	NA	NA	NA	NA	12	0	2018-07-26 to 2024-05-30	0	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Selenium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0	NA	NA	NA	NA	NA	NA	NA	12	0	2018-07-25 to 2024-05-31	0	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Selenium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	18	0	0	NA	NA	NA	NA	NA	NA	NA	12	0	2018-07-25 to 2024-05-31	0	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Thallium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - No detected results.	24	4	0.389	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-23 to 2024-05-10	0.266	NA	NA	NA	NA	NA	NA	NA
WAP-1	Thallium, Total	No Trend	Probably Increasing	20	12	0.519	0.218	0.207	79.3	39	0.0000045	0.207	No Trend	12	6	2018-12-05 to 2024-06-03	0.525	0.395	0.1	90	24	0.0000379	0.1	No Trend
WAP-2RR	Thallium, Total	Increasing	Probably Increasing	20	10	0.628	0.463	0.00771	99.2	79	0.0000171	0.00771	Trend confirmed	12	3	2018-12-05 to 2024-05-30	0.451	0.439	0.0836	91.6	22	0	0.0836	No Trend
WAP-3S	Thallium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.213	NA	NA	NA	NA	NA	NA	NA	12	0	2018-12-05 to 2024-05-30	0.266	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Thallium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.213	NA	NA	NA	NA	NA	NA	NA	12	0	2018-12-04 to 2024-05-31	0.266	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Thallium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	20	2	0.323	NA	NA	NA	NA	NA	NA	NA	12	1	2018-12-04 to 2024-05-31	0.331	NA	NA	NA	NA	NA	NA	NA

Note:

Mann Kendall Trends are classified based on Aziz (2003) guidance. Thiel-Sen test results are interpreted based on 5% signficance level (95% confidence level). Any group with a p-value < 0.05 is considered a statistically significant trend. The direction of trend is based on the sen slope (positive slope = increasing trend; negative slope = decreasing trend).

Table A-5. Upper Tolerance Limits (UTLs) & Updated Groundwater Protection Standards (GWPS)

		Interwell Background Data Characterization [a]												Groundwater Protection Standard (GWPS) Determination					UTL Calculation Details		
Constituent	Units	n	n, non-detects	max reporting limit	max detected value	mean	median	min sample date	max sample date	standard deviation	coefficient of variation	Mann Kendall trend	data distribution (Shapiro-Francia) [b]	normalizing data transformation (if any)	UTL	UTL Result Detection Status [c]	MCL/RSL	GWPS	GWPS Source	UTL calculation method	UTL calculation details	Minimum Coverage (%)
Antimony, Total	mg/L	44	30	0.005	0.002	0.00173	0.002	2016-06-10	2024-06-03	0.000762	0.441	Stable	Not normal (Interwell Background)	NA - Original Data	0.005	No	0.006	0.006	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Arsenic, Total	mg/L	44	0	NA	0.025	0.00672	0.0053	2016-06-10	2024-06-03	0.00512	0.762	Probably Decreasing	Not normal (Interwell Background)	NA - Original Data	0.025	Yes	0.01	0.025	UTL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Barium, Total	mg/L	44	0	NA	0.99	0.304	0.175	2016-06-10	2024-06-03	0.227	0.747	No Trend	Not normal (Interwell Background)	NA - Original Data	0.99	Yes	2	2	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Beryllium, Total	mg/L	44	23	0.001	0.0012	0.000701	0.000995	2016-06-10	2024-06-03	0.000369	0.526	No Trend	Not normal (Interwell Background)	NA - Original Data	0.0012	Yes	0.004	0.004	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Cadmium, Total	mg/L	44	33	0.001	0.00049	0.000806	0.001	2016-06-10	2024-06-03	0.000328	0.407	No Trend	Not normal (Interwell Background)	NA - Original Data	0.001	No	0.005	0.005	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Chromium, Total	mg/L	44	12	0.01	0.046	0.00816	0.005	2016-06-10	2024-06-03	0.00986	1.21	No Trend	Not normal (Interwell Background)	NA - Original Data	0.046	Yes	0.1	0.1	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Cobalt, Total	mg/L	44	2	0.002	0.019	0.00368	0.0018	2016-06-10	2024-06-03	0.00444	1.21	No Trend	Not normal (Interwell Background)	NA - Original Data	0.019	Yes	0.006	0.019	UTL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Fluoride	mg/L	43	0	NA	2	0.39	0.29	2016-08-12	2024-06-03	0.327	0.839	Increasing	Not normal (Interwell Background)	NA - Original Data	2	Yes	4	4	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.3
Lead, Total	mg/L	44	10	0.003	0.035	0.0064	0.0033	2016-06-10	2024-06-03	0.00811	1.27	No Trend	Not normal (Interwell Background)	NA - Original Data	0.035	Yes	0.015	0.035	UTL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Lithium, Total	mg/L	44	0	NA	0.039	0.0128	0.011	2016-06-10	2024-06-03	0.00632	0.493	Decreasing	Not normal (Interwell Background)	NA - Original Data	0.039	Yes	0.04	0.04	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Mercury, Total	mg/L	39	39	0.0005	NA	0.000215	0.0002	2016-06-10	2024-06-03	6.7e-05	0.311	All non-detect results.	Not normal (Interwell Background)	NA - Original Data	0.0005	No	0.002	0.002	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	92.6
Molybdenum, Total	mg/L	44	4	0.005	0.013	0.00288	0.00175	2016-06-10	2024-06-03	0.00257	0.891	Decreasing	Not normal (Interwell Background)	NA - Original Data	0.013	Yes	0.1	0.1	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Radium-226 & 228	pCi/L	37	0	NA	4.74	1.13	1.08	2016-06-10	2024-06-03	0.795	0.703	No Trend	Not normal (Interwell Background)	NA - Original Data	4.74	Yes	5	5	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	92.2
Selenium, Total	mg/L	40	35	0.005	0.0028	0.00456	0.005	2016-06-10	2024-06-03	0.00121	0.266	Probably Increasing	Not normal (Interwell Background)	NA - Original Data	0.005	No	0.05	0.05	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	92.8
Thallium, Total	mg/L	44	28	0.002	0.00063	0.000784	0.001	2016-06-10	2024-06-03	0.000452	0.576	Increasing	Not normal (Interwell Background)	NA - Original Data	0.002	No	0.002	0.002	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4

Note:

[a] Interwell background datasets are analyte specific and include data collected from background wells (CCR-AP-7 and WAP-1). Interwell background datasets were re-tested for outliers, secular trends, and data normality. No outliers were removed.

[b] Parametric tolerance limit calculations were performed on normally distributed background data. If background data were not normally distributed, non-parametric tolerance limit calculations were performed.

[c] In some cases, the maximum value selected as the UTL is a non-detect result with an elevated reporting limit.

Units = mg/L, milligrams per liter. pCi/L = picocuries per liter.

Table A-6. Confidence Intervals & SSL Identification

			Confidence Interval (CI) Dataset						CI Calculation [a]				SSL Confirmation		Non-Parametric CI Statistics	
Location	**Chemical**	**Units**	**n**	**max (Rank n)**	**min (Rank 1)**	**median**	**mean**	**standard deviation**	**CI calculation method**	**degrees of freedom**	**95% Confidence UCL**	**95% Confidence LCL**	**GWPS**	**LCL > GWPS?**	**bootstrap iterations**	**bootstrap median**
WAP-3S	Lithium, Total	mg/L	20	0.12	0.033	0.078	0.073000	0.0241	Calculation of the Confidence Interval Around the Normal Mean (Parametric)	19	0.0843	0.0617	0.04	Yes, SSL	NA	NA
WAP-3S	Molybdenum, Total	mg/L	20	1.5	0.26	0.82	0.820000	0.311	Calculation of the Confidence Interval Around the Normal Mean (Parametric)	19	0.966	0.674	0.10	Yes, SSL	NA	NA
WAP-4S	Molybdenum, Total	mg/L	20	0.58	0.00078	0.455	0.425039	0.116	Bootstrap Calculation of the Confidence Interval Around the Median (Non-Parametric)	19	0.475	0.415	0.10	Yes, SSL	10000	0.465

Note:

Confidence intervals are calculated for analyte/well pairs with GWPS exceedances in the May 2024 dataset.

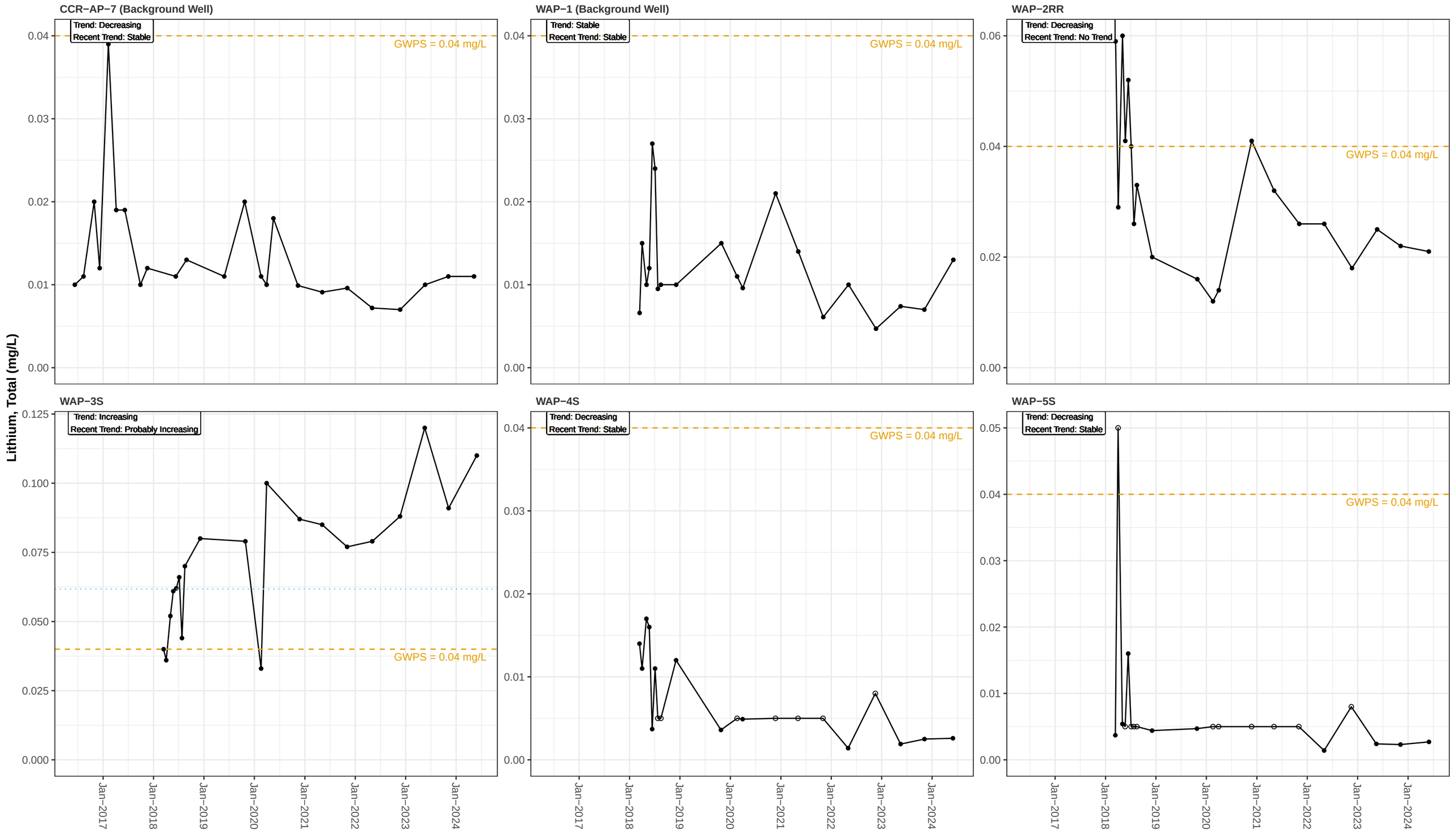
[a] The 95% lower confience level (LCL) is compared to the Groundwater Protection Standard (GWPS) to confirm a statistically significant level (SSL). The 95% upper confidence level (UCL) is also shown for purposes of comparison.

Table A-7. Groundwater Protection Standard (GWPS) Comparison Table

Location	Constituent	Units	Sample Date	Sample Result	Upper Threshold Limit (UTL)	GWPS	GWPS Exceedance	LCL	SSL Confirmed
WAP-3S	Lithium, Total	mg/L	2024-05-30	0.11	0.039	0.04	Yes	0.0617	Yes
WAP-3S	Molybdenum, Total	mg/L	2024-05-30	0.44	0.013	0.1	Yes	0.674	Yes
WAP-4S	Molybdenum, Total	mg/L	2024-05-31	0.49	0.013	0.1	Yes	0.415	Yes
WAP-2RR	Antimony, Total	mg/L	2024-05-30	0.002 U	0.005	0.006	No	NA	No
WAP-3S	Antimony, Total	mg/L	2024-05-30	0.002 U	0.005	0.006	No	NA	No
WAP-4S	Antimony, Total	mg/L	2024-05-31	0.002 U	0.005	0.006	No	NA	No
WAP-5S	Antimony, Total	mg/L	2024-05-31	0.002 U	0.005	0.006	No	NA	No
WAP-2RR	Arsenic, Total	mg/L	2024-05-30	0.005 U	0.025	0.025	No	NA	No
WAP-3S	Arsenic, Total	mg/L	2024-05-30	0.005 U	0.025	0.025	No	NA	No
WAP-4S	Arsenic, Total	mg/L	2024-05-31	0.0052	0.025	0.025	No	NA	No
WAP-5S	Arsenic, Total	mg/L	2024-05-31	0.005 U	0.025	0.025	No	NA	No
WAP-2RR	Barium, Total	mg/L	2024-05-30	0.038	0.99	2	No	NA	No
WAP-3S	Barium, Total	mg/L	2024-05-30	0.055	0.99	2	No	NA	No
WAP-4S	Barium, Total	mg/L	2024-05-31	0.054	0.99	2	No	NA	No
WAP-5S	Barium, Total	mg/L	2024-05-31	0.044	0.99	2	No	NA	No
WAP-2RR	Beryllium, Total	mg/L	2024-05-30	0.001 U	0.0012	0.004	No	NA	No
WAP-3S	Beryllium, Total	mg/L	2024-05-30	0.001 U	0.0012	0.004	No	NA	No
WAP-4S	Beryllium, Total	mg/L	2024-05-31	0.001 U	0.0012	0.004	No	NA	No
WAP-5S	Beryllium, Total	mg/L	2024-05-31	0.001 U	0.0012	0.004	No	NA	No
WAP-2RR	Cadmium, Total	mg/L	2024-05-30	0.00027 J	0.001	0.005	No	NA	No
WAP-3S	Cadmium, Total	mg/L	2024-05-30	0.00024 J	0.001	0.005	No	NA	No
WAP-4S	Cadmium, Total	mg/L	2024-05-31	0.00034 J	0.001	0.005	No	NA	No
WAP-5S	Cadmium, Total	mg/L	2024-05-31	0.001 U	0.001	0.005	No	NA	No
WAP-2RR	Chromium, Total	mg/L	2024-05-30	0.005 U	0.046	0.1	No	NA	No
WAP-3S	Chromium, Total	mg/L	2024-05-30	0.005 U	0.046	0.1	No	NA	No
WAP-4S	Chromium, Total	mg/L	2024-05-31	0.005 U	0.046	0.1	No	NA	No
WAP-5S	Chromium, Total	mg/L	2024-05-31	0.005 U	0.046	0.1	No	NA	No
WAP-2RR	Cobalt, Total	mg/L	2024-05-30	0.0013	0.019	0.019	No	NA	No
WAP-3S	Cobalt, Total	mg/L	2024-05-30	0.0012	0.019	0.019	No	NA	No
WAP-4S	Cobalt, Total	mg/L	2024-05-31	0.0018	0.019	0.019	No	NA	No
WAP-5S	Cobalt, Total	mg/L	2024-05-31	0.0043	0.019	0.019	No	NA	No
WAP-2RR	Fluoride	mg/L	2024-05-30	0.33	2	4	No	NA	No
WAP-3S	Fluoride	mg/L	2024-05-30	0.42	2	4	No	NA	No
WAP-4S	Fluoride	mg/L	2024-05-31	0.21 J+	2	4	No	NA	No
WAP-5S	Fluoride	mg/L	2024-05-31	0.1 J+	2	4	No	NA	No
WAP-2RR	Lead, Total	mg/L	2024-05-30	0.001 U	0.035	0.035	No	NA	No
WAP-3S	Lead, Total	mg/L	2024-05-30	0.001 U	0.035	0.035	No	NA	No
WAP-4S	Lead, Total	mg/L	2024-05-31	0.001 U	0.035	0.035	No	NA	No
WAP-5S	Lead, Total	mg/L	2024-05-31	0.001 U	0.035	0.035	No	NA	No
WAP-2RR	Lithium, Total	mg/L	2024-05-30	0.021	0.039	0.04	No	NA	No
WAP-4S	Lithium, Total	mg/L	2024-05-31	0.0026 J	0.039	0.04	No	NA	No
WAP-5S	Lithium, Total	mg/L	2024-05-31	0.0027 J	0.039	0.04	No	NA	No
WAP-2RR	Mercury, Total	mg/L	2024-05-30	0.0002 U	0.0005	0.002	No	NA	No
WAP-3S	Mercury, Total	mg/L	2024-05-30	0.0002 U	0.0005	0.002	No	NA	No
WAP-4S	Mercury, Total	mg/L	2024-05-31	0.0002 U	0.0005	0.002	No	NA	No
WAP-5S	Mercury, Total	mg/L	2024-05-31	0.0002 U	0.0005	0.002	No	NA	No
WAP-2RR	Molybdenum, Total	mg/L	2024-05-30	0.081	0.013	0.1	No	NA	No
WAP-5S	Molybdenum, Total	mg/L	2024-05-31	0.005 U	0.013	0.1	No	NA	No
WAP-2RR	Radium-226 & 228	pCi/L	2024-05-30	0.188 U	4.74	5	No	NA	No
WAP-3S	Radium-226 & 228	pCi/L	2024-05-30	1.2	4.74	5	No	NA	No
WAP-4S	Radium-226 & 228	pCi/L	2024-05-31	0.434 UJ	4.74	5	No	NA	No
WAP-5S	Radium-226 & 228	pCi/L	2024-05-31	0.124 U	4.74	5	No	NA	No
WAP-2RR	Selenium, Total	mg/L	2024-05-30	0.0071	0.005	0.05	No	NA	No
WAP-3S	Selenium, Total	mg/L	2024-05-30	0.005 U	0.005	0.05	No	NA	No
WAP-4S	Selenium, Total	mg/L	2024-05-31	0.005 U	0.005	0.05	No	NA	No
WAP-5S	Selenium, Total	mg/L	2024-05-31	0.005 U	0.005	0.05	No	NA	No
WAP-2RR	Thallium, Total	mg/L	2024-05-30	0.001 U	0.002	0.002	No	NA	No
WAP-3S	Thallium, Total	mg/L	2024-05-30	0.001 U	0.002	0.002	No	NA	No
WAP-4S	Thallium, Total	mg/L	2024-05-31	0.001 U	0.002	0.002	No	NA	No
WAP-5S	Thallium, Total	mg/L	2024-05-31	0.001 U	0.002	0.002	No	NA	No

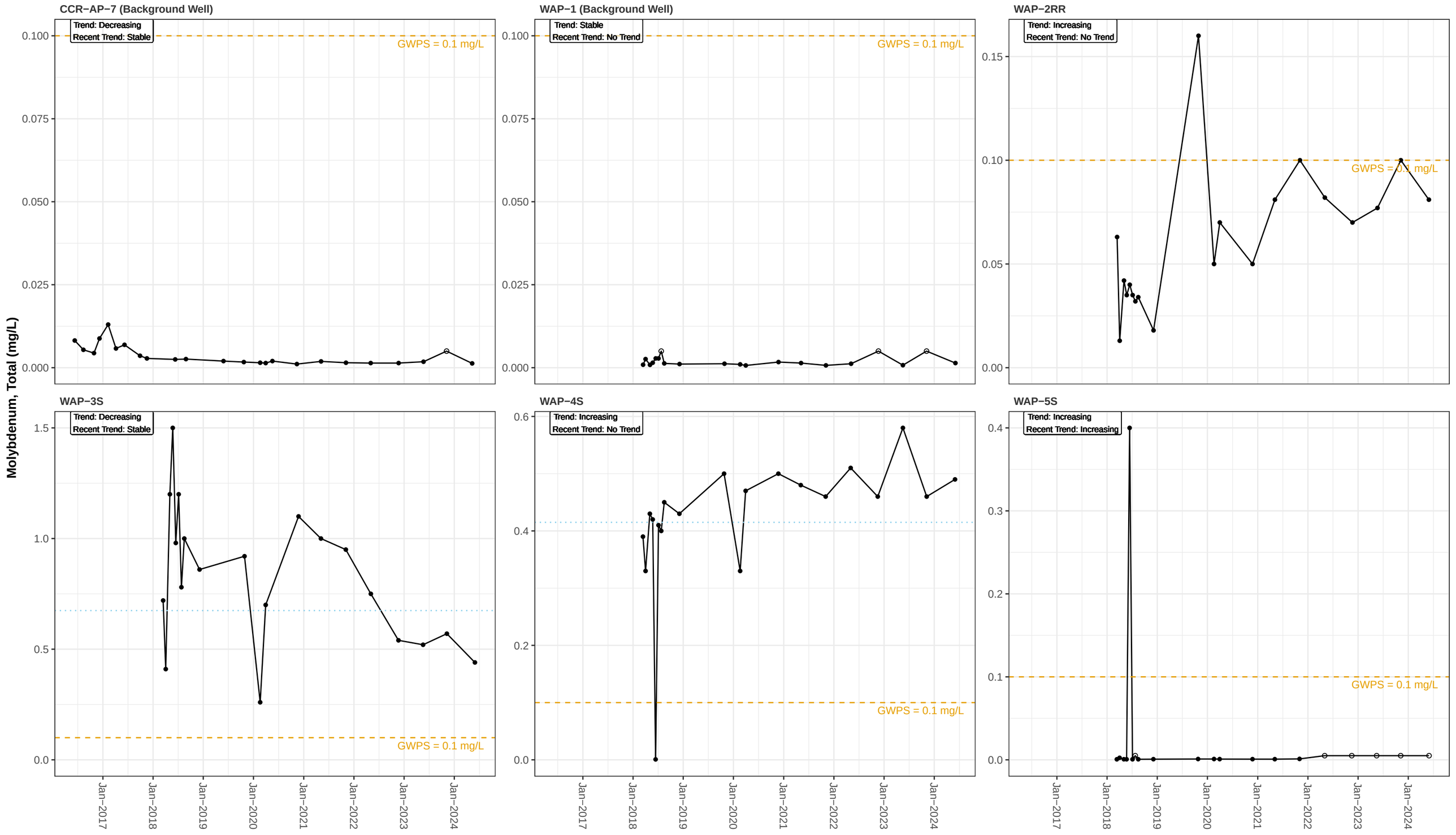
Groundwater Protection Standard (GWPS) is the maximum value between the Upper Threshold Limit (UTL) and the Maximum Contaminant Level/Regional Screening Level (MCL/RSL). The 95% Lower Confidence Limit (LCL) is calculated if the event sample result exceeded the GWPS. If the LCL is greater than the GWPS, a Statistically Significant Level (SSL) is confirmed.

Assessment Monitoring Trend Analysis for Lithium, Total



Notes: GWPS = Groundwater Protection Standard (max level between the MCL/RSL and UTL). LCL = lower confidence limit. If LCL > GWPS, a statistically significant level (SSL) is concluded.
*Recent data are considered the 12 most recent data points collected for each well/analyte.
Trend classifications are based on Aziz (2003) guidance for Mann Kendall trend test results.

Assessment Monitoring Trend Analysis for Molybdenum, Total



Notes: GWPS = Groundwater Protection Standard (max level between the MCL/RSL and UTL). LCL = lower confidence limit. If LCL > GWPS, a statistically significant level (SSL) is concluded.
*Recent data are considered the 12 most recent data points collected for each well/analyte.
Trend classifications are based on Aziz (2003) guidance for Mann Kendall trend test results.

HALEY & ALDRICH, INC.
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864.214.8771

TECHNICAL MEMORANDUM

20 March 2025
File No. 0129420-032

TO: Southern Indiana Gas and Electric Company

FROM: Haley & Aldrich, Inc.
Todd Plating, Program Manager, Geologist
Steven F. Putrich, P.E., Project Principal

SUBJECT: Statistical Evaluation of the November 2024 Semi-annual Groundwater Assessment Monitoring Data
Southern Indiana Gas and Electric Company
West Ash Pond
F.B. Culley Generating Station; Warrick County, Indiana

Pursuant to Title 40 Code of Federal Regulations (40 CFR) § 257.93 and § 257.95 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the November 2024 semi-annual assessment monitoring event for the F.B. Culley Generating Station West Ash Pond (WAP). Haley & Aldrich, Inc. (Haley & Aldrich) completed this statistical evaluation to determine if Appendix IV groundwater monitoring constituents have been detected in downgradient wells at statistically significant levels (SSL) greater than the Groundwater Protection Standards (GWPS), consistent with the requirements in 40 CFR § 257.95.

Methods used during this statistical analysis are described in Haley & Aldrich's 2017 *Statistical Data Analysis Plan for the F.B. Culley Generating Station*. A summary of how applicable performance standards described in 40 CFR § 257.93 (g) were achieved include:

- 40 CFR § 257.93 (g) (1) – Data set distribution was evaluated using basic summary statistics, graphical methods including probability plots, and the Shapiro-Wilk Test for Normality. Data sets were also evaluated for statistical outliers using box plots and either Dixon's Q Test for Outliers or Rosner's Outlier Test depending on sample size. Outlier identification and data set distribution groups are summarized in Attachment A. For background limit calculations, parametric methods were used for normally distributed data sets and non-parametric methods were used for non-normally distributed data sets.
- 40 CFR § 257.93 (g) (2) – Not applicable

- 40 CFR § 257.93 (g) (3) – Not applicable
- 40 CFR § 257.93 (g) (4) – Levels of confidence and additional supporting information for the use of tolerance intervals and prediction limits are included in Attachment A.
- 40 CFR § 257.93 (g) (5) – Non-detect values were accounted for by simple substitution, where the detection limit replaced the non-detect result. Non-detect values are identified and summarized in Attachment A.
- 40 CFR § 257.93 (g) (6) – Time series plots for groundwater monitoring wells included in this evaluation were reviewed to identify potential seasonal variability. No additional statistics to account for seasonality or spatial variability were necessary. Temporal trends were evaluated using the non-parametric Mann-Kendall Trend Test and Theil-Sen Estimator.

Data from the groundwater sampling event for the downgradient monitoring wells (WAP-2RR, WAP-3S, WAP-4S and WAP-5S) were compared to the GWPS established from the background dataset for the upgradient monitoring wells (WAP-1 and CCR-AP-7) for detected Appendix IV constituents. November 2024 analytical results are summarized in Table 1. GWPS for each of the Appendix IV constituents have been set equal to the highest value of the maximum contaminant level (MCL), regional screening level (RSL), or background concentration. The results of the assessment monitoring statistical evaluation are discussed below and provided in Attachment A.

Development of Groundwater Protection Standard

The Rule provides four specific options for statistical evaluation of groundwater quality data collected at a coal combustion residual (CCR) unit (40 CFR §257.93(f) (1-4)). Haley & Aldrich certified the tolerance limit (TL) as the statistical method used for developing BTVs for the GWPS on 14 January 2019. As noted above, the GWPS for each of the Appendix IV constituents have been set equal to the highest value of the MCL, RSL, or BTV (TL). The most recent groundwater sampling result from each compliance well was compared to the GWPS to determine if additional statistical testing is warranted.

STATISTICAL EVALUATION

BTVs are periodically updated per the document *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009* (Unified Guidance). Prior to calculating BTVs, data were evaluated for outlier results, data distribution, and spatial and temporal variability. Potential outlier sample results that would warrant removal from the data set based on likely error in sampling or measurement were identified through statistical outlier using the outliers (version 0.15) R programming package and either the Dixon's or Rosner's Test for Outliers. Potential outliers were further evaluated by visual inspection of box plots and probability plots, and field forms and analytical laboratory reports were reviewed as necessary. No sample data were identified as outliers that warranted removal from the dataset.

Background data distributions were assessed using the stats (version 4.3.3) R programming package and either the Shapiro-Wilk or Shapiro-Francia Test for Normality. Data distributions were further evaluated

by visual inspection of probability and distribution plots. Data distributions inform appropriate BTV calculation methods. Background and downgradient data sets were evaluated for spatial and temporal variability by visual inspection of box plots and time series plots and using the Mann-Kendall Trend Tests (Kendall R programming package, version 2.2.1) and Theil-Sen Estimator (trend R programming package, version 1.1.6). Spatial and temporal variability in background data sets inform appropriate BTV calculation methods.

INTERWELL BACKGROUND EVALUATION

An interwell statistical evaluation was used to determine the TL and identify potential SSLs for detected Appendix IV constituents. The interwell evaluation compares the most recent value from downgradient compliance wells to a background dataset composed of pooled upgradient well data. TLs were calculated from the pooled background well dataset utilizing R programming language and the EnvStats (version 2.8.1) and tolerance (version 2.0.0) packages. The TL procedure is one in which a concentration limit for each constituent is established from the distribution of the background data, with a minimum 95 percent confidence level. The upper endpoint of a tolerance interval is called the UTL. Depending on the data distribution, parametric or non-parametric TL procedures are used. Parametric TLs utilize normally distributed data or data normalized via a transformation of the background data used to construct the limit. If the data are non-normal and a transformation is not indicated, non-parametric procedures (order statistics or bootstrap methods) are used to calculate the TL. If all the background data are non-detect, a maximum reporting limit may serve as an appropriate UTL.

GWPS COMPARISON AND LCL CALCULATIONS

A lower confidence limit (LCL) was calculated for any Appendix IV constituent measured in a downgradient well during the November 2024 sampling event at a concentration greater than the GWPS. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence, or conversely, with a low probability of error. An SSL is indicated when the downgradient well/constituent-specific LCL is greater than the GWPS.

TREND SUMMARY

Mann-Kendall trend analyses were performed on data sets from downgradient wells of sufficient sample size as described above. Results of the trend analysis are summarized in Table 2. Trends indicated for constituents identified as SSLs are summarized below:

- Lithium in WAP-3S is increasing (trend confirmed by Thiel-Sen test, Sen's slope)
- Molybdenum in WAP-3S is decreasing
- Molybdenum in WAP-4S is increasing (trend confirmed by Thiel-Sen test), however no trend was identified in recent data (samples collected between August 2018 and November 2024)

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

The sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the November 2024 assessment monitoring event were compared to their respective GWPS (Attachment A). LCLs were calculated where constituents were detected at concentrations greater than a GWPS. An SSL is indicated when the LCL is greater than the GWPS. SSLs are summarized in the table below. Based on previous compliance sampling events and statistical evaluations, interwell comparisons were utilized for all downgradient wells and constituents. Based on this statistical evaluation, lithium, and molybdenum remain as the only Appendix IV constituent SSLs downgradient of the WAP. This information is provided for Southern Indiana Gas and Electric Company's records. Because no new constituents were identified as SSLs, additional notification pertaining to the statistical analysis of the November 2024 groundwater analytical results is not required at this time.

Statistically Significant Level Summary - Appendix IV Constituents

Location	Constituent	November 2024 Concentration (mg/L)	Newly Identified SSL
WAP-3S	Lithium, Total	0.10	No
WAP-3S	Molybdenum, Total	0.46	No
WAP-4S	Molybdenum, Total	0.45	No

Notes:
mg/L = milligrams per liter

Enclosure

Table 1. Summary of Groundwater Quality Data - November 2024
Table 2. Trend Summary

Attachment A – Assessment Monitoring Statistical Analysis Summary

TABLES

TABLE 1
SUMMARY OF GROUNDWATER QUALITY DATA - NOVEMBER 2024
F.B. CULLEY GENERATING STATION - FORMER WEST ASH POND
WARRICK COUNTY, INDIANA

Location Group	Action Level	Background		Downgradient				
Location Name	GWPS	CCR-AP-7	WAP-1	WAP-2RR	WAP-3S	WAP-4S	WAP-5S	WAP-5S
Sample Name		CCR-AP-7-20241115	WAP-1-20241113	WAP-2RR-20241113	WAP-3S-20241113	WAP-4S-20241112	WAP-5S-20241112	DUP-1-20241112
Sample Date		11/15/2024	11/13/2024	11/13/2024	11/13/2024	11/12/2024	11/12/2024	11/12/2024
Lab Sample ID		180-182934-5	180-182730-4	180-182735-1	180-182735-2	180-182735-4	180-182735-7	180-182735-14
Detection Monitoring - Appendix III Constituents (mg/L)								
Boron, Total	4	0.1 U	0.1 U	**2**	**3.5**	**12**	**6.6**	**5.9**
Calcium, Total	NA	**120**	**180**	**110**	**95**	**230**	**230**	**190**
Chloride	NA	**43**	**75**	**44**	**37**	**110**	**71**	**73**
Fluoride	4	**0.41**	**0.24**	**0.29**	**0.42**	**0.25**	**0.084 J**	**0.23 J**
pH, Field (pH units)	NA	**7.1 J**	**7.1 J**	**6.7 J**	**7.8 J**	**7.3 J**	**6.8 J**	**6.7 J**
Sulfate	NA	**86**	**300**	**79**	**130**	**400**	**580**	**490**
Total Dissolved Solids (TDS)	NA	**600**	**980**	**520**	**430**	**1100**	**1200**	**1200**
Assessment Monitoring - Appendix IV Constituents (mg/L)								
Antimony, Total	0.006	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	**0.0042 J**	**0.0029 J**	**0.0016 J**	0.005 U	**0.0061**	**0.00086 J**	0.005 U
Barium, Total	2	**0.12**	**0.41**	**0.057**	**0.037**	**0.044**	**0.046**	**0.04**
Beryllium, Total	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Boron, Total	4	0.1 U	0.1 U	**2**	**3.5**	**12**	**6.6**	**5.9**
Cadmium, Total	0.005	**0.000097 J**	0.001 U	**0.00028 J**	**0.00012 J**	**0.00011 J**	0.001 U	0.001 U
Chromium, Total	0.1	0.005 U	**0.0039 J**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, Total	0.019	**0.00036 J**	**0.0016**	**0.0013**	**0.00078 J**	**0.0015**	**0.0065**	**0.0055**
Fluoride (mg/L)	4	**0.41**	**0.24**	**0.29**	**0.42**	**0.25**	**0.084 J**	**0.23 J**
Lead, Total	0.035	0.001 U	**0.0036**	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium, Total	0.04	**0.0098**	**0.0071 J**	**0.019**	**0.1**	0.008 U	0.008 U	0.008 U
Mercury, Total	0.002	**0.00032 J-**	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	**0.0011 J**	0.005 U	**0.08**	**0.46**	**0.45**	0.005 U	0.005 U
Selenium, Total	0.05	0.005 U	0.005 U	**0.004 J**	0.005 U	0.005 U	0.005 U	0.005 U
Thallium, Total	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)								
Radium-226	NA	**0.496 ± 0.169**	**0.525 ± 0.195**	**0.178 ± 0.112**	1 U ± 0.0808	1 U ± 0.0857	1 U ± 0.0777	1 U ± 0.111
Radium-228	NA	1 U ± 0.507	1 U ± 0.481	1 U ± 0.458	1 U ± 0.399	1 U ± 0.463	1 U ± 0.556	1 U ± 0.41
Radium-226 & 228	5	**0.854 J ± 0.534**	5 UJ ± 0.519	5 UJ ± 0.471	5 U ± 0.407	5 U ± 0.471	5 U ± 0.561	5 U ± 0.425
Field Parameters								
Temperature (Deg C)	NA	**15.91**	**17.09**	**16.89**	**17.14**	**16.14**	**17.04**	**17.04**
Dissolved Oxygen, Field (mg/L)	NA	**0.22**	**9.72**	**0.07**	**0.1**	**0.06**	**0.12**	**0.12**
Conductivity, Field (mS/cm)	NA	**1.0125**	**0.66**	**0.7646**	**0.63046**	**1.3222**	**1.3952**	**1.3952**
Oxidation Reduction Potential (ORP), Field (mv)	NA	**-101.6**	**-2.8**	**72.4**	**-23**	**-45.1**	**21.8**	**21.8**
Turbidity, Field (NTU)	NA	**5.57**	**22.78**	**0**	**8.77**	**0**	**0**	**0**
pH, Field (pH units)	NA	**7.16**	**7.35**	**6.68**	**7.79**	**7.26**	**6.55**	**6.55**

NOTES:
CCR: Coal Combustion Residuals.
mg/L: milligram per liter.
pCi/L: picoCurie per liter.
Deg C: Degrees Celsius.
mS/cm: milliSiemen per centimeter
mv: millivolts
NTU: Nephelometric Turbidity Units
NA: not available
USEPA: United States Environmental Protection Agency.
GWPS: Ground Water Protection Standard.

Qualifiers:
J: value is estimated
J+: value is estimated with a potential high bias
J-: value is estimated with a potential low bias
U: not detected, value is the laboratory reporting limit
U: activity level below the Minimum Detectable Concentration (Radiological)

*Results in **bold** are detected.*
Shaded values indicate a GWPS exceedance
- USEPA. 2020. Final Rule: Disposal of Coal Combustion Residuals from Electric Utilities. July 26. 40 CFR Part 257.
https://www.epa.gov/coalash/coal-ash-rule

Table 2. Trend Summary

Location	Chemical	Units	Identified Trends		Trend Analysis on All Available Data				Trend Analysis on Recent Data			
			Trend (All Data)	Trend (Recent Data)	Results, n	Detected Results, n	Max Concentration	Sen Slope (rate of change per year)	*Results, n	*Detected Results, n	*Max Concentration	*Sen Slope (rate of change per year)
CCR-AP-7	Antimony, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	25	3	0.0025	NA	12	1	0.0025	NA
WAP-1	Antimony, Total	mg/L	Stable	No Trend	21	11	0.002	NA	12	9	0.002	NA
WAP-2RR	Antimony, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - Only one detected result.	21	1	0.0025	NA	12	1	0.0025	NA
WAP-3S	Antimony, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - Only one detected result.	21	1	0.0025	NA	12	1	0.0025	NA
WAP-4S	Antimony, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.01	NA	12	0	0.01	NA
WAP-5S	Antimony, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.0025	NA	12	0	0.0025	NA
CCR-AP-7	Arsenic, Total	mg/L	Decreasing	Stable	25	25	0.018	-0.00064	12	12	0.015	NA
WAP-1	Arsenic, Total	mg/L	Stable	Stable	21	21	0.025	NA	12	12	0.025	NA
WAP-2RR	Arsenic, Total	mg/L	Increasing	No Trend	21	19	0.0078	0.000122	12	11	0.0078	NA
WAP-3S	Arsenic, Total	mg/L	Decreasing	No Trend	21	17	0.0064	-0.000388	12	8	0.0064	NA
WAP-4S	Arsenic, Total	mg/L	Increasing	No Trend	21	21	0.027	0.000643	12	12	0.027	NA
WAP-5S	Arsenic, Total	mg/L	No Trend	No Trend	21	16	0.005	NA	12	8	0.005	NA
CCR-AP-7	Barium, Total	mg/L	Decreasing	Stable	25	25	0.19	-0.00547	12	12	0.19	NA
WAP-1	Barium, Total	mg/L	No Trend	Probably Decreasing	21	21	0.99	NA	12	12	0.99	NA
WAP-2RR	Barium, Total	mg/L	Stable	No Trend	21	21	0.086	NA	12	12	0.086	NA
WAP-3S	Barium, Total	mg/L	Decreasing	No Trend	21	21	0.39	-0.0318	12	12	0.39	NA
WAP-4S	Barium, Total	mg/L	Decreasing	Stable	21	21	0.08	-0.00184	12	12	0.069	NA
WAP-5S	Barium, Total	mg/L	Decreasing	Decreasing	21	21	0.063	-0.00226	12	12	0.061	-0.00198
CCR-AP-7	Beryllium, Total	mg/L	No Trend	Not Evaluated - Only one detected result.	25	7	0.00075	NA	12	1	0.0005	NA
WAP-1	Beryllium, Total	mg/L	No Trend	No Trend	21	14	0.0012	NA	12	6	0.00099	NA
WAP-2RR	Beryllium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	21	2	0.0005	NA	12	1	0.0005	NA
WAP-3S	Beryllium, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	21	1	0.0005	NA	12	0	0.0005	NA
WAP-4S	Beryllium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.0005	NA	12	0	0.0005	NA
WAP-5S	Beryllium, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	21	1	0.0005	NA	12	0	0.0005	NA
CCR-AP-7	Cadmium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	25	3	0.0005	NA	12	1	0.0005	NA
WAP-1	Cadmium, Total	mg/L	No Trend	No Trend	21	9	0.0005	NA	12	4	0.0005	NA
WAP-2RR	Cadmium, Total	mg/L	Decreasing	Probably Decreasing	21	19	0.001	-2.77e-05	12	10	0.00053	NA
WAP-3S	Cadmium, Total	mg/L	No Trend	Stable	21	12	0.0005	NA	12	4	0.0005	NA
WAP-4S	Cadmium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Decreasing	21	5	0.0005	NA	12	3	0.0005	0
WAP-5S	Cadmium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	21	2	0.0005	NA	12	2	0.0005	NA
CCR-AP-7	Chromium, Total	mg/L	No Trend	Not Evaluated - Majority of data (>75%) non-detect.	25	11	0.019	NA	12	2	0.0062	NA
WAP-1	Chromium, Total	mg/L	Stable	Stable	21	20	0.046	NA	12	12	0.027	NA
WAP-2RR	Chromium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	21	3	0.0057	NA	12	2	0.0057	NA
WAP-3S	Chromium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	21	3	0.005	NA	12	2	0.005	NA
WAP-4S	Chromium, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	21	1	0.005	NA	12	0	0.005	NA
WAP-5S	Chromium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.005	NA	12	0	0.005	NA
CCR-AP-7	Cobalt, Total	mg/L	Decreasing	No Trend	25	23	0.015	-0.000214	12	10	0.0049	NA
WAP-1	Cobalt, Total	mg/L	Stable	Stable	21	21	0.019	NA	12	12	0.012	NA
WAP-2RR	Cobalt, Total	mg/L	Stable	Stable	21	21	0.0097	NA	12	12	0.0097	NA
WAP-3S	Cobalt, Total	mg/L	No Trend	Stable	21	21	0.0018	NA	12	12	0.0018	NA
WAP-4S	Cobalt, Total	mg/L	Stable	Decreasing	21	21	0.0093	NA	12	12	0.0023	-0.0001
WAP-5S	Cobalt, Total	mg/L	Decreasing	Stable	21	21	0.0094	-0.000461	12	12	0.0094	NA
CCR-AP-7	Fluoride	mg/L	Increasing	No Trend	24	24	0.72	0.0198	12	12	0.72	NA
WAP-1	Fluoride	mg/L	No Trend	No Trend	21	21	2	NA	12	12	2	NA
WAP-2RR	Fluoride	mg/L	Increasing	No Trend	21	21	0.4	0.0257	12	12	0.4	NA
WAP-3S	Fluoride	mg/L	Stable	Stable	21	21	0.77	NA	12	12	0.76	NA
WAP-4S	Fluoride	mg/L	No Trend	No Trend	21	21	0.28	NA	12	12	0.28	NA
WAP-5S	Fluoride	mg/L	Stable	No Trend	21	20	0.21	NA	12	11	0.13	NA
CCR-AP-7	Lead, Total	mg/L	Decreasing	No Trend	25	14	0.02	-9.84e-05	12	4	0.006	NA
WAP-1	Lead, Total	mg/L	Stable	Stable	21	21	0.035	NA	12	12	0.022	NA
WAP-2RR	Lead, Total	mg/L	No Trend	No Trend	21	8	0.0064	NA	12	6	0.0056	NA
WAP-3S	Lead, Total	mg/L	No Trend	Stable	21	14	0.0027	NA	12	6	0.0027	NA
WAP-4S	Lead, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	21	4	0.0015	NA	12	2	0.0015	NA
WAP-5S	Lead, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	21	2	0.0015	NA	12	2	0.0015	NA
CCR-AP-7	Lithium, Total	mg/L	Decreasing	Stable	25	25	0.039	-0.000524	12	12	0.018	NA
WAP-1	Lithium, Total	mg/L	Stable	Stable	21	21	0.027	NA	12	12	0.021	NA
WAP-2RR	Lithium, Total	mg/L	Decreasing	Stable	21	21	0.06	-0.00394	12	12	0.041	NA
WAP-3S	Lithium, Total	mg/L	Increasing	Increasing	21	21	0.12	0.00899	12	12	0.12	0.00622
WAP-4S	Lithium, Total	mg/L	Decreasing	Stable	21	13	0.017	-0.00104	12	6	0.0049	NA
WAP-5S	Lithium, Total	mg/L	Probably Decreasing	Stable	21	8	0.025	NA	12	5	0.0047	NA
CCR-AP-7	Mercury, Total	mg/L	Not Evaluated - Only one detected result.	Not Evaluated - Only one detected result.	22	1	0.00032	NA	12	1	0.00032	NA
WAP-1	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.00025	NA	12	0	0.00025	NA
WAP-2RR	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.00025	NA	12	0	0.00025	NA
WAP-3S	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.00025	NA	12	0	0.00025	NA
WAP-4S	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.00025	NA	12	0	0.00025	NA
WAP-5S	Mercury, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.00025	NA	12	0	0.00025	NA

Abbreviations: mg/L = milligrams per liter; n = sample count

Notes: *Recent data defined as the 12 most recent data points. MK = Mann Kendall Trend Test. Identified trends were classified based on Aziz (2003) guidance and Mann-Kendall Trend Test Results. Thiel-Sen slopeonly calculated for increasing or decreasing trends.

Location	Chemical	Units	Identified Trends		Trend Analysis on All Available Data				Trend Analysis on Recent Data			
			Trend (All Data)	Trend (Recent Data)	Results, n	Detected Results, n	Max Concentration	Sen Slope (rate of change per year)	*Results, n	*Detected Results, n	*Max Concentration	*Sen Slope (rate of change per year)
CCR-AP-7	Molybdenum, Total	mg/L	Decreasing	Stable	25	24	0.013	-0.000588	12	11	0.0025	NA
WAP-1	Molybdenum, Total	mg/L	Stable	No Trend	21	17	0.0028	NA	12	9	0.0025	NA
WAP-2RR	Molybdenum, Total	mg/L	Increasing	No Trend	21	21	0.16	0.00779	12	12	0.16	NA
WAP-3S	Molybdenum, Total	mg/L	Decreasing	Probably Decreasing	21	21	1.5	-0.0732	12	12	1.1	NA
WAP-4S	Molybdenum, Total	mg/L	Increasing	Stable	21	21	0.58	0.0192	12	12	0.58	NA
WAP-5S	Molybdenum, Total	mg/L	Increasing	Increasing	21	14	0.4	0.000133	12	6	0.0025	0.000356
CCR-AP-7	Radium-226 & 228	mg/L	Stable	Increasing	22	15	1.72	NA	12	5	0.866	0.133
WAP-1	Radium-226 & 228	mg/L	No Trend	Stable	17	13	4.74	NA	12	9	4.74	NA
WAP-2RR	Radium-226 & 228	mg/L	No Trend	No Trend	18	8	2.15	NA	12	5	2.15	NA
WAP-3S	Radium-226 & 228	mg/L	Stable	Stable	17	11	1.38	NA	12	7	1.38	NA
WAP-4S	Radium-226 & 228	mg/L	No Trend	No Trend	18	6	1.86	NA	12	4	1.86	NA
WAP-5S	Radium-226 & 228	mg/L	No Trend	No Trend	18	6	1.49	NA	12	5	1.49	NA
CCR-AP-7	Selenium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	23	3	0.0028	NA	12	1	0.0028	NA
WAP-1	Selenium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - No detected results.	19	2	0.0025	NA	12	0	0.0025	NA
WAP-2RR	Selenium, Total	mg/L	Probably Increasing	No Trend	19	8	0.0071	NA	12	8	0.0071	NA
WAP-3S	Selenium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.0025	NA	12	0	0.0025	NA
WAP-4S	Selenium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.0025	NA	12	0	0.0025	NA
WAP-5S	Selenium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.0025	NA	12	0	0.0025	NA
CCR-AP-7	Thallium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - No detected results.	25	4	0.001	NA	12	0	0.001	NA
WAP-1	Thallium, Total	mg/L	No Trend	No Trend	21	12	0.001	NA	12	5	0.001	NA
WAP-2RR	Thallium, Total	mg/L	Increasing	Not Evaluated - Majority of data (>75%) non-detect.	21	10	0.001	5.32e-05	12	2	0.001	NA
WAP-3S	Thallium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.001	NA	12	0	0.001	NA
WAP-4S	Thallium, Total	mg/L	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.001	NA	12	0	0.001	NA
WAP-5S	Thallium, Total	mg/L	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	21	2	0.001	NA	12	1	0.001	NA

Abbreviations: mg/L = milligrams per liter; n = sample count

Notes: *Recent data defined as the 12 most recent data points. MK = Mann Kendall Trend Test. Identified trends were classified based on Aziz (2003) guidance and Mann-Kendall Trend Test Results. Thiel-Sen slopeonly calculated for increasing or decreasing trends.

ATTACHMENT A
Assessment Monitoring Statistical Analysis Summary

Table A-1. Descriptive Statistics

Location	Constituent	Units	n	n, non-detects	percent of non-detects	max	min	mean	median	standard deviation	variance	reporting limit range	date range
CCR-AP-7	Antimony, Total	mg/L	25	22	88	0.0050	0.000160	0.0019444	0.002	8.1e-04	6.5e-07	0.002 - 0.005	2016-06-10 to 2024-11-15
WAP-1	Antimony, Total	mg/L	21	10	48	0.0020	0.000450	0.0014981	0.002	6.0e-04	3.6e-07	0.002 - 0.002	2018-03-15 to 2024-11-13
WAP-2RR	Antimony, Total	mg/L	21	20	95	0.0050	0.001100	0.0021000	0.002	6.9e-04	4.8e-07	0.002 - 0.005	2018-03-15 to 2024-11-13
WAP-3S	Antimony, Total	mg/L	21	20	95	0.0050	0.000430	0.0020681	0.002	7.5e-04	5.7e-07	0.002 - 0.005	2018-03-15 to 2024-11-13
WAP-4S	Antimony, Total	mg/L	21	21	100	0.0200	0.002000	0.0030000	0.002	3.9e-03	1.6e-05	0.002 - 0.02	2018-03-14 to 2024-11-12
WAP-5S	Antimony, Total	mg/L	21	21	100	0.0050	0.002000	0.0021476	0.002	6.5e-04	4.3e-07	0.002 - 0.005	2018-03-13 to 2024-11-12
CCR-AP-7	Arsenic, Total	mg/L	25	0	0	0.0180	0.000660	0.0056132	0.0048	4.1e-03	1.7e-05	NA	2016-06-10 to 2024-11-15
WAP-1	Arsenic, Total	mg/L	21	0	0	0.0250	0.002900	0.0077286	0.0051	5.9e-03	3.5e-05	NA	2018-03-15 to 2024-11-13
WAP-2RR	Arsenic, Total	mg/L	21	2	10	0.0078	0.000470	0.0018257	0.001	2.0e-03	3.9e-06	0.001 - 0.005	2018-03-15 to 2024-11-13
WAP-3S	Arsenic, Total	mg/L	21	4	19	0.0100	0.000310	0.0030171	0.0027	2.3e-03	5.3e-06	0.005 - 0.01	2018-03-15 to 2024-11-13
WAP-4S	Arsenic, Total	mg/L	21	0	0	0.0270	0.000730	0.0061062	0.0048	5.5e-03	3.0e-05	NA	2018-03-14 to 2024-11-12
WAP-5S	Arsenic, Total	mg/L	21	5	24	0.0100	0.000390	0.0018029	0.00086	2.4e-03	5.6e-06	0.001 - 0.01	2018-03-13 to 2024-11-12
CCR-AP-7	Barium, Total	mg/L	25	0	0	0.1900	0.076000	0.1267200	0.12	2.8e-02	7.9e-04	NA	2016-06-10 to 2024-11-15
WAP-1	Barium, Total	mg/L	21	0	0	0.9900	0.370000	0.5109524	0.46	1.7e-01	2.8e-02	NA	2018-03-15 to 2024-11-13
WAP-2RR	Barium, Total	mg/L	21	0	0	0.0860	0.023000	0.0432381	0.041	1.6e-02	2.7e-04	NA	2018-03-15 to 2024-11-13
WAP-3S	Barium, Total	mg/L	21	0	0	0.3900	0.024000	0.1514762	0.12	1.2e-01	1.5e-02	NA	2018-03-15 to 2024-11-13
WAP-4S	Barium, Total	mg/L	21	0	0	0.0800	0.043000	0.0554286	0.054	8.3e-03	6.8e-05	NA	2018-03-14 to 2024-11-12
WAP-5S	Barium, Total	mg/L	21	0	0	0.0630	0.037000	0.0506190	0.052	7.1e-03	5.1e-05	NA	2018-03-13 to 2024-11-12
CCR-AP-7	Beryllium, Total	mg/L	25	18	72	0.0010	0.000067	0.0007699	0.001	3.6e-04	1.3e-07	0.0005 - 0.001	2016-06-10 to 2024-11-15
WAP-1	Beryllium, Total	mg/L	21	7	33	0.0012	0.000072	0.0006481	0.00059	3.7e-04	1.3e-07	0.0005 - 0.001	2018-03-15 to 2024-11-13
WAP-2RR	Beryllium, Total	mg/L	21	19	90	0.0010	0.000240	0.0009100	0.001	2.3e-04	5.3e-08	0.0005 - 0.001	2018-03-15 to 2024-11-13
WAP-3S	Beryllium, Total	mg/L	21	20	95	0.0010	0.000068	0.0009318	0.001	2.3e-04	5.1e-08	0.0005 - 0.001	2018-03-15 to 2024-11-13
WAP-4S	Beryllium, Total	mg/L	21	21	100	0.0010	0.000500	0.0009762	0.001	1.1e-04	1.2e-08	0.0005 - 0.001	2018-03-14 to 2024-11-12
WAP-5S	Beryllium, Total	mg/L	21	20	95	0.0010	0.000084	0.0009326	0.001	2.2e-04	5.0e-08	0.0005 - 0.001	2018-03-13 to 2024-11-12
CCR-AP-7	Cadmium, Total	mg/L	25	22	88	0.0010	0.000097	0.0008823	0.001	2.8e-04	8.0e-08	0.0005 - 0.001	2016-06-10 to 2024-11-15
WAP-1	Cadmium, Total	mg/L	21	12	57	0.0010	0.000130	0.0006900	0.001	3.7e-04	1.4e-07	0.001 - 0.001	2018-03-15 to 2024-11-13
WAP-2RR	Cadmium, Total	mg/L	21	2	10	0.0010	0.000270	0.0004786	0.00042	2.3e-04	5.4e-08	0.001 - 0.001	2018-03-15 to 2024-11-13
WAP-3S	Cadmium, Total	mg/L	21	9	43	0.0010	0.000110	0.0005438	0.00024	4.1e-04	1.7e-07	0.001 - 0.001	2018-03-15 to 2024-11-13
WAP-4S	Cadmium, Total	mg/L	21	16	76	0.0010	0.000062	0.0008068	0.001	3.6e-04	1.3e-07	0.001 - 0.001	2018-03-14 to 2024-11-12
WAP-5S	Cadmium, Total	mg/L	21	19	90	0.0010	0.000092	0.0009163	0.001	2.6e-04	7.0e-08	0.001 - 0.001	2018-03-13 to 2024-11-12
CCR-AP-7	Chromium, Total	mg/L	25	14	56	0.0190	0.000470	0.0039380	0.002	3.8e-03	1.5e-05	0.0014 - 0.01	2016-06-10 to 2024-11-15
WAP-1	Chromium, Total	mg/L	21	1	5	0.0460	0.002200	0.0128381	0.01	1.2e-02	1.5e-04	0.0022 - 0.0022	2018-03-15 to 2024-11-13
WAP-2RR	Chromium, Total	mg/L	21	18	86	0.0057	0.002000	0.0028476	0.002	1.4e-03	2.0e-06	0.002 - 0.005	2018-03-15 to 2024-11-13
WAP-3S	Chromium, Total	mg/L	21	18	86	0.0100	0.000990	0.0028757	0.002	2.0e-03	3.9e-06	0.002 - 0.01	2018-03-15 to 2024-11-13
WAP-4S	Chromium, Total	mg/L	21	20	95	0.0100	0.000880	0.0027562	0.002	2.0e-03	4.0e-06	0.002 - 0.01	2018-03-14 to 2024-11-12
WAP-5S	Chromium, Total	mg/L	21	21	100	0.0100	0.002000	0.0028095	0.002	2.0e-03	3.9e-06	0.002 - 0.01	2018-03-13 to 2024-11-12
CCR-AP-7	Cobalt, Total	mg/L	25	2	8	0.0150	0.000210	0.0021072	0.00087	3.1e-03	9.9e-06	0.0005 - 0.002	2016-06-10 to 2024-11-15
WAP-1	Cobalt, Total	mg/L	21	0	0	0.0190	0.000440	0.0052876	0.0045	5.0e-03	2.5e-05	NA	2018-03-15 to 2024-11-13
WAP-2RR	Cobalt, Total	mg/L	21	0	0	0.0097	0.000520	0.0025719	0.0022	2.1e-03	4.2e-06	NA	2018-03-15 to 2024-11-13
WAP-3S	Cobalt, Total	mg/L	21	0	0	0.0018	0.000340	0.0008881	0.00078	4.3e-04	1.8e-07	NA	2018-03-15 to 2024-11-13
WAP-4S	Cobalt, Total	mg/L	21	0	0	0.0093	0.001300	0.0021667	0.0018	1.7e-03	2.8e-06	NA	2018-03-14 to 2024-11-12
WAP-5S	Cobalt, Total	mg/L	21	0	0	0.0094	0.001600	0.0070429	0.0075	2.0e-03	3.8e-06	NA	2018-03-13 to 2024-11-12
CCR-AP-7	Fluoride	mg/L	24	0	0	0.7200	0.140000	0.3362500	0.305	1.3e-01	1.6e-02	NA	2016-08-12 to 2024-11-15
WAP-1	Fluoride	mg/L	21	0	0	2.0000	0.110000	0.4442857	0.28	4.5e-01	2.0e-01	NA	2018-03-15 to 2024-11-13
WAP-2RR	Fluoride	mg/L	21	0	0	0.4000	0.110000	0.2466667	0.25	8.1e-02	6.5e-03	NA	2018-03-15 to 2024-11-13
WAP-3S	Fluoride	mg/L	21	0	0	0.7700	0.240000	0.5276190	0.53	1.5e-01	2.3e-02	NA	2018-03-15 to 2024-11-13
WAP-4S	Fluoride	mg/L	21	0	0	0.2800	0.110000	0.2071429	0.22	4.4e-02	2.0e-03	NA	2018-03-14 to 2024-11-12
WAP-5S	Fluoride	mg/L	21	1	5	0.2100	0.030000	0.1019048	0.1	3.5e-02	1.2e-03	0.1 - 0.1	2018-03-13 to 2024-11-12
CCR-AP-7	Lead, Total	mg/L	25	11	44	0.0200	0.000130	0.0028348	0.001	4.3e-03	1.8e-05	0.001 - 0.003	2016-06-10 to 2024-11-15
WAP-1	Lead, Total	mg/L	21	0	0	0.0350	0.000680	0.0102514	0.008	9.5e-03	9.0e-05	NA	2018-03-15 to 2024-11-13
WAP-2RR	Lead, Total	mg/L	21	13	62	0.0064	0.000160	0.0013919	0.001	1.6e-03	2.5e-06	0.001 - 0.001	2018-03-15 to 2024-11-13
WAP-3S	Lead, Total	mg/L	21	7	33	0.0030	0.000230	0.0009681	0.001	7.3e-04	5.4e-07	0.001 - 0.003	2018-03-15 to 2024-11-13
WAP-4S	Lead, Total	mg/L	21	17	81	0.0030	0.000130	0.0009662	0.001	5.5e-04	3.0e-07	0.001 - 0.003	2018-03-14 to 2024-11-12
WAP-5S	Lead, Total	mg/L	21	19	90	0.0030	0.000200	0.0010267	0.001	5.0e-04	2.5e-07	0.001 - 0.003	2018-03-13 to 2024-11-12
CCR-AP-7	Lithium, Total	mg/L	25	0	0	0.0390	0.007000	0.0132240	0.011	6.6e-03	4.4e-05	NA	2016-06-10 to 2024-11-15
WAP-1	Lithium, Total	mg/L	21	0	0	0.0270	0.004700	0.0119048	0.01	5.9e-03	3.4e-05	NA	2018-03-15 to 2024-11-13
WAP-2RR	Lithium, Total	mg/L	21	0	0	0.0600	0.012000	0.0300952	0.026	1.4e-02	2.0e-04	NA	2018-03-15 to 2024-11-13
WAP-3S	Lithium, Total	mg/L	21	0	0	0.1200	0.033000	0.0742857	0.079	2.4e-02	5.8e-04	NA	2018-03-15 to 2024-11-13
WAP-4S	Lithium, Total	mg/L	21	8	38	0.0170	0.001400	0.0070286	0.005	4.7e-03	2.2e-05	0.005 - 0.008	2018-03-14 to 2024-11-12
WAP-5S	Lithium, Total	mg/L	21	13	62	0.0500	0.001400	0.0073333	0.005	1.0e-02	1.0e-04	0.005 - 0.05	2018-03-13 to 2024-11-12
CCR-AP-7	Mercury, Total	mg/L	22	21	95	0.0005	0.000200	0.0002191	0.0002	6.8e-05	4.6e-09	0.0002 - 0.0005	2016-06-10 to 2024-11-15
WAP-1	Mercury, Total	mg/L	19	19	100	0.0005	0.000200	0.0002158	0.0002	6.9e-05	4.7e-09	0.0002 - 0.0005	2018-03-15 to 2024-11-13
WAP-2RR	Mercury, Total	mg/L	19	19	100	0.0005	0.000200	0.0002158	0.0002	6.9e-05	4.7e-09	0.0002 - 0.0005	2018-03-15 to 2024-11-13
WAP-3S	Mercury, Total	mg/L	19	19	100	0.0005	0.000200	0.0002158	0.0002	6.9e-05	4.7e-09	0.0002 - 0.0005	2018-03-15 to 2024-11-13
WAP-4S	Mercury, Total	mg/L	20	20	100	0.0005	0.000200	0.0002150	0.0002	6.7e-05	4.5e-09	0.0002 - 0.0005	2018-03-14 to 2024-11-12
WAP-5S	Mercury, Total	mg/L	19	19	100	0.0005	0.000200	0.0002158	0.0002	6.9e-05	4.7e-09	0.0002 - 0.0005	2018-03-13 to 2024-11-12
CCR-AP-7	Molybdenum, Total	mg/L	25	1	4	0.0130	0.001100	0.0035640	0.002	3.0e-03	9.0e-06	0.005 - 0.005	2016-06-10 to 2024-11-15
WAP-1	Molybdenum, Total	mg/L	21	4	19	0.0050	0.000680	0.0020905	0.0014	1.6e-03	2.5e-06	0.005 - 0.005	2018-03-15 to 2024-11-13
WAP-2RR	Molybdenum, Total	mg/L	21	0	0	0.1600	0.013000	0.0625238	0.063	3.4e-02	1.1e-03	NA	2018-03-15 to 2024-11-13
WAP-3S	Molybdenum, Total	mg/L	21	0	0	1.5000	0.260000	0.8028571	0.78	3.1e-01	9.8e-02	NA	2018-03-15 to 2024-11-13
WAP-4S	Molybdenum, Total	mg/L	21	0	0	0.5800	0.000780	0.4262276	0.45	1.1e-01	1.3e-02	NA	2018-03-14 to 2024-11-12
WAP-5S	Molybdenum, Total	mg/L	21	7	33	0.4000	0.000640	0.0212862	0.00097	8.7e-02	7.5e-03	0.005 - 0.005	2018-03-13 to 2024-11-12
CCR-AP-7	Radium-226 & 228	pCi/L	22	7	32	1.7200	0.126000	0.8477727	0.809	4.4e-01	1.9e-01	0.126 - 1.44	2016-06-10 to 2024-11-15
WAP-1	Radium-226 & 228	pCi/L	17	4	24	4.7400	0.480000	1.4451176	1.24	9.9e-01	9.8e-01	0.48 - 1.45	2018-04-02 to 2024-11-13
WAP-2RR	Radium-226 & 228	pCi/L	18	10	56	2.1500	0.088300	0.5787944	0.4	5.5e-01	3.0e-01	0.0883 - 0.797	2018-03-15 to 2024-11-13
WAP-3S	Radium-226 & 228	pCi/L	17	6	35	1.3800	0.122000	0.8172941	0.899	3.8e-01	1.5e-01	0.122 - 1.08	2018-03-15 to 2024-11-13
WAP-4S	Radium-226 & 228	pCi/L	18	12	67	1.8600	0.131000	0.5435000	0.314	4.6e-01	2.2e-01	0.131 - 0.901	2018-03-14 to 2024-11-12
WAP-5S	Radium-226 & 228	pCi/L	18	12	67	1.4900	0.045400	0.4373556	0.357	3.4e-01	1.2e-01	0.0454 - 0.409	2018-03-13 to 2024-11-12
CCR-AP-7	Selenium, Total	mg/L	23	20	87	0.0050	0.000350	0.0045165	0.005	1.3e-03	1.8e-06	0.005 - 0.005	2016-06-10 to 2024-11-15
WAP-1	Selenium, Total	mg/L	19	17	89	0.0050	0.001800	0.0046632	0.005	1.0e-03	1.0e-06	0.005 - 0.005	2018-03-15 to 2024-11-13

Location	Constituent	Units	n	n, non-detects	percent of non-detects	max	min	mean	median	standard deviation	variance	reporting limit range	date range
WAP-2RR	Selenium, Total	mg/L	19	11	58	0.0071	0.001400	0.0047947	0.005	1.3e-03	1.8e-06	0.005 - 0.005	2018-03-15 to 2024-11-13
WAP-3S	Selenium, Total	mg/L	19	19	100	0.0050	0.005000	0.0050000	0.005	0.0e+00	0.0e+00	0.005 - 0.005	2018-03-15 to 2024-11-13
WAP-4S	Selenium, Total	mg/L	19	19	100	0.0050	0.005000	0.0050000	0.005	0.0e+00	0.0e+00	0.005 - 0.005	2018-03-14 to 2024-11-12
WAP-5S	Selenium, Total	mg/L	19	19	100	0.0050	0.005000	0.0050000	0.005	0.0e+00	0.0e+00	0.005 - 0.005	2018-03-13 to 2024-11-12
CCR-AP-7	Thallium, Total	mg/L	25	21	84	0.0020	0.000066	0.0009138	0.001	3.8e-04	1.5e-07	0.001 - 0.002	2016-06-10 to 2024-11-15
WAP-1	Thallium, Total	mg/L	21	9	43	0.0020	0.000083	0.0006501	0.00053	4.8e-04	2.3e-07	0.001 - 0.002	2018-03-15 to 2024-11-13
WAP-2RR	Thallium, Total	mg/L	21	11	52	0.0020	0.000067	0.0006616	0.001	5.2e-04	2.7e-07	0.001 - 0.002	2018-03-15 to 2024-11-13
WAP-3S	Thallium, Total	mg/L	21	21	100	0.0020	0.001000	0.0010476	0.001	2.2e-04	4.8e-08	0.001 - 0.002	2018-03-15 to 2024-11-13
WAP-4S	Thallium, Total	mg/L	21	21	100	0.0020	0.001000	0.0010476	0.001	2.2e-04	4.8e-08	0.001 - 0.002	2018-03-14 to 2024-11-12
WAP-5S	Thallium, Total	mg/L	21	19	90	0.0020	0.000110	0.0009681	0.001	3.4e-04	1.2e-07	0.001 - 0.002	2018-03-13 to 2024-11-12

Table A-2. Results of Shapiro-Wilk Test for Normality

		Shapiro-Wilk Test for Normality (R programming, package = stats, version 4.3.3, function = shapiro.test, non-detects substituted by 0.5*reporting limit)				
Location	**Constituent**	**W statistic**	**p-value**	**Sample Count (n)**	**Non-Detect Count (n)**	**Data Normality (significance level = 0.05)**
CCR-AP-7	Antimony, Total	0.457	1.4e-08	25	22	Not normal
WAP-1	Antimony, Total	0.808	0.00086	21	10	Not normal
WAP-2RR	Antimony, Total	0.250	2e-09	21	20	Not normal
WAP-3S	Antimony, Total	0.368	1.5e-08	21	20	Not normal
WAP-4S	Antimony, Total	NA	NA	21	21	Not Evaluated - All Non-Detect Results
WAP-5S	Antimony, Total	NA	NA	21	21	Not Evaluated - All Non-Detect Results
CCR-AP-7	Arsenic, Total	0.864	0.0033	25	0	Not normal
WAP-1	Arsenic, Total	0.750	0.00012	21	0	Not normal
WAP-2RR	Arsenic, Total	0.634	4.6e-06	21	2	Not normal
WAP-3S	Arsenic, Total	0.928	0.12	21	4	Normal
WAP-4S	Arsenic, Total	0.616	2.9e-06	21	0	Not normal
WAP-5S	Arsenic, Total	0.669	1.2e-05	21	5	Not normal
CCR-AP-7	Barium, Total	0.948	0.23	25	0	Normal
WAP-1	Barium, Total	0.767	0.00021	21	0	Not normal
WAP-2RR	Barium, Total	0.918	0.079	21	0	Normal
WAP-3S	Barium, Total	0.878	0.013	21	0	Not normal
WAP-4S	Barium, Total	0.906	0.046	21	0	Not normal
WAP-5S	Barium, Total	0.961	0.53	21	0	Normal
CCR-AP-7	Beryllium, Total	0.742	2.8e-05	25	18	Not normal
WAP-1	Beryllium, Total	0.907	0.049	21	7	Not normal
WAP-2RR	Beryllium, Total	0.431	5e-08	21	19	Not normal
WAP-3S	Beryllium, Total	0.349	1.1e-08	21	20	Not normal
WAP-4S	Beryllium, Total	NA	NA	21	21	Not Evaluated - All Non-Detect Results
WAP-5S	Beryllium, Total	0.350	1.1e-08	21	20	Not normal
CCR-AP-7	Cadmium, Total	0.466	1.8e-08	25	22	Not normal
WAP-1	Cadmium, Total	0.703	3e-05	21	12	Not normal
WAP-2RR	Cadmium, Total	0.758	0.00016	21	2	Not normal
WAP-3S	Cadmium, Total	0.784	0.00038	21	9	Not normal
WAP-4S	Cadmium, Total	0.575	1.1e-06	21	16	Not normal
WAP-5S	Cadmium, Total	0.349	1.1e-08	21	19	Not normal
CCR-AP-7	Chromium, Total	0.593	3.5e-07	25	14	Not normal
WAP-1	Chromium, Total	0.764	0.0002	21	1	Not normal
WAP-2RR	Chromium, Total	0.635	4.8e-06	21	18	Not normal
WAP-3S	Chromium, Total	0.639	5.2e-06	21	18	Not normal
WAP-4S	Chromium, Total	0.495	1.8e-07	21	20	Not normal
WAP-5S	Chromium, Total	NA	NA	21	21	Not Evaluated - All Non-Detect Results
CCR-AP-7	Cobalt, Total	0.592	3.5e-07	25	2	Not normal
WAP-1	Cobalt, Total	0.789	0.00045	21	0	Not normal
WAP-2RR	Cobalt, Total	0.717	4.5e-05	21	0	Not normal
WAP-3S	Cobalt, Total	0.935	0.17	21	0	Normal
WAP-4S	Cobalt, Total	0.403	2.9e-08	21	0	Not normal
WAP-5S	Cobalt, Total	0.891	0.023	21	0	Not normal
CCR-AP-7	Fluoride	0.888	0.012	24	0	Not normal
WAP-1	Fluoride	0.623	3.5e-06	21	0	Not normal
WAP-2RR	Fluoride	0.975	0.83	21	0	Normal
WAP-3S	Fluoride	0.972	0.78	21	0	Normal
WAP-4S	Fluoride	0.957	0.45	21	0	Normal
WAP-5S	Fluoride	0.915	0.068	21	1	Normal
CCR-AP-7	Lead, Total	0.563	1.7e-07	25	11	Not normal
WAP-1	Lead, Total	0.788	0.00043	21	0	Not normal
WAP-2RR	Lead, Total	0.480	1.3e-07	21	13	Not normal
WAP-3S	Lead, Total	0.749	0.00012	21	7	Not normal
WAP-4S	Lead, Total	0.560	7.6e-07	21	17	Not normal
WAP-5S	Lead, Total	0.387	2.2e-08	21	19	Not normal
CCR-AP-7	Lithium, Total	0.678	3.8e-06	25	0	Not normal
WAP-1	Lithium, Total	0.863	0.0072	21	0	Not normal
WAP-2RR	Lithium, Total	0.905	0.043	21	0	Not normal
WAP-3S	Lithium, Total	0.973	0.79	21	0	Normal
WAP-4S	Lithium, Total	0.749	0.00012	21	8	Not normal
WAP-5S	Lithium, Total	0.470	1.1e-07	21	13	Not normal
CCR-AP-7	Mercury, Total	0.342	5.8e-09	22	21	Not normal
WAP-1	Mercury, Total	NA	NA	19	19	Not Evaluated - All Non-Detect Results
WAP-2RR	Mercury, Total	NA	NA	19	19	Not Evaluated - All Non-Detect Results

Location	Constituent	Shapiro-Wilk Test for Normality (R programming, package = stats, version 4.3.3, function = shapiro.test, non-detects substituted by 0.5*reporting limit) W statistic	p-value	Sample Count (n)	Non-Detect Count (n)	Data Normality (significance level = 0.05)
WAP-3S	Mercury, Total	NA	NA	19	19	Not Evaluated - All Non-Detect Results
WAP-4S	Mercury, Total	NA	NA	20	20	Not Evaluated - All Non-Detect Results
WAP-5S	Mercury, Total	NA	NA	19	19	Not Evaluated - All Non-Detect Results
CCR-AP-7	Molybdenum, Total	0.757	4.7e-05	25	1	Not normal
WAP-1	Molybdenum, Total	0.864	0.0074	21	4	Not normal
WAP-2RR	Molybdenum, Total	0.920	0.088	21	0	Normal
WAP-3S	Molybdenum, Total	0.978	0.89	21	0	Normal
WAP-4S	Molybdenum, Total	0.717	4.6e-05	21	0	Not normal
WAP-5S	Molybdenum, Total	0.235	1.6e-09	21	7	Not normal
CCR-AP-7	Radium-226 & 228	0.967	0.64	22	7	Normal
WAP-1	Radium-226 & 228	0.771	0.00083	17	4	Not normal
WAP-2RR	Radium-226 & 228	0.780	0.00081	18	10	Not normal
WAP-3S	Radium-226 & 228	0.918	0.14	17	6	Normal
WAP-4S	Radium-226 & 228	0.752	0.00034	18	12	Not normal
WAP-5S	Radium-226 & 228	0.754	0.00037	18	12	Not normal
CCR-AP-7	Selenium, Total	0.383	7.8e-09	23	20	Not normal
WAP-1	Selenium, Total	0.362	3.7e-08	19	17	Not normal
WAP-2RR	Selenium, Total	0.712	7.7e-05	19	11	Not normal
WAP-3S	Selenium, Total	NA	NA	19	19	Not Evaluated - All Non-Detect Results
WAP-4S	Selenium, Total	NA	NA	19	19	Not Evaluated - All Non-Detect Results
WAP-5S	Selenium, Total	NA	NA	19	19	Not Evaluated - All Non-Detect Results
CCR-AP-7	Thallium, Total	0.597	4e-07	25	21	Not normal
WAP-1	Thallium, Total	0.882	0.016	21	9	Not normal
WAP-2RR	Thallium, Total	0.829	0.0019	21	11	Not normal
WAP-3S	Thallium, Total	NA	NA	21	21	Not Evaluated - All Non-Detect Results
WAP-4S	Thallium, Total	NA	NA	21	21	Not Evaluated - All Non-Detect Results
WAP-5S	Thallium, Total	0.531	4e-07	21	19	Not normal

Table A-3. Results of Rosner/Dixon Test for Outliers

			Rosner or Dixon Test for Outliers (R programming, package = outliers, version 0.15, function = dixon.test or rosnerTest, non-detects substituted by 0.5*reporting limit)						
Location	**Constituent**	**Outlier Test**	**n**	**n, non-detects**	**statistic**	**Alternative Hypothesis**	**p-value**	**Statistical Outlier (significance level = 0.05)**	**Outlier Removed**
CCR-AP-7	Antimony, Total	Dixon	25	22	0.898	highest value 0.0025 is an outlier	0	Yes	No
WAP-1	Antimony, Total	Dixon	21	10	0.472	highest value 0.002 is an outlier	0.058	No	NA
WAP-2RR	Antimony, Total	Dixon	21	20	1.000	highest value 0.0025 is an outlier	0	Yes	No
WAP-3S	Antimony, Total	Dixon	21	20	1.000	highest value 0.0025 is an outlier	0	Yes	No
WAP-4S	Antimony, Total	Dixon	21	21	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-5S	Antimony, Total	Dixon	21	21	All results are non-detect	Not Evaluated	NA	NA	NA
CCR-AP-7	Arsenic, Total	Dixon	25	0	0.561	highest value 0.018 is an outlier	0	Yes	No
WAP-1	Arsenic, Total	Dixon	21	0	0.507	highest value 0.025 is an outlier	0.029	Yes	No
WAP-2RR	Arsenic, Total	Dixon	21	2	0.675	highest value 0.0078 is an outlier	0	Yes	No
WAP-3S	Arsenic, Total	Dixon	21	4	0.452	highest value 0.0064 is an outlier	0.082	No	NA
WAP-4S	Arsenic, Total	Dixon	21	0	0.628	highest value 0.027 is an outlier	0	Yes	No
WAP-5S	Arsenic, Total	Dixon	21	5	0.556	highest value 0.005 is an outlier	0.0083	Yes	No
CCR-AP-7	Barium, Total	Dixon	25	0	0.333	highest value 0.19 is an outlier	0.29	No	NA
WAP-1	Barium, Total	Dixon	21	0	0.508	highest value 0.99 is an outlier	0.028	Yes	No
WAP-2RR	Barium, Total	Dixon	21	0	0.393	highest value 0.086 is an outlier	0.19	No	NA
WAP-3S	Barium, Total	Dixon	21	0	0.167	highest value 0.39 is an outlier	0.67	No	NA
WAP-4S	Barium, Total	Dixon	21	0	0.548	highest value 0.08 is an outlier	0.011	Yes	No
WAP-5S	Barium, Total	Dixon	21	0	0.292	lowest value 0.037 is an outlier	0.58	No	NA
CCR-AP-7	Beryllium, Total	Dixon	25	18	0.192	lowest value 0.000067 is an outlier	0.97	No	NA
WAP-1	Beryllium, Total	Dixon	21	7	0.309	highest value 0.0012 is an outlier	0.49	No	NA
WAP-2RR	Beryllium, Total	Dixon	21	19	0.500	lowest value 0.00024 is an outlier	0.033	Yes	No
WAP-3S	Beryllium, Total	Dixon	21	20	1.000	lowest value 0.000068 is an outlier	0	Yes	No
WAP-4S	Beryllium, Total	Dixon	21	21	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-5S	Beryllium, Total	Dixon	21	20	1.000	lowest value 0.000084 is an outlier	0	Yes	No
CCR-AP-7	Cadmium, Total	Dixon	25	22	0.380	lowest value 0.000097 is an outlier	0.15	No	NA
WAP-1	Cadmium, Total	Dixon	21	12	0.216	lowest value 0.00013 is an outlier	0.98	No	NA
WAP-2RR	Cadmium, Total	Dixon	21	2	0.653	highest value 0.001 is an outlier	0	Yes	No
WAP-3S	Cadmium, Total	Dixon	21	9	0.128	lowest value 0.00011 is an outlier	0.45	No	NA
WAP-4S	Cadmium, Total	Dixon	21	16	0.269	lowest value 0.000062 is an outlier	0.7	No	NA
WAP-5S	Cadmium, Total	Dixon	21	19	1.000	lowest value 0.000092 is an outlier	0	Yes	No
CCR-AP-7	Chromium, Total	Dixon	25	14	0.705	highest value 0.019 is an outlier	0	Yes	No
WAP-1	Chromium, Total	Dixon	21	1	0.448	highest value 0.046 is an outlier	0.088	No	NA
WAP-2RR	Chromium, Total	Dixon	21	18	0.681	highest value 0.0057 is an outlier	0	Yes	No
WAP-3S	Chromium, Total	Dixon	21	18	0.625	highest value 0.005 is an outlier	0	Yes	No
WAP-4S	Chromium, Total	Dixon	21	20	0.625	highest value 0.005 is an outlier	0	Yes	No
WAP-5S	Chromium, Total	Dixon	21	21	All results are non-detect	Not Evaluated	NA	NA	NA
CCR-AP-7	Cobalt, Total	Dixon	25	2	0.659	highest value 0.015 is an outlier	0	Yes	No
WAP-1	Cobalt, Total	Dixon	21	0	0.395	highest value 0.019 is an outlier	0.19	No	NA
WAP-2RR	Cobalt, Total	Dixon	21	0	0.595	highest value 0.0097 is an outlier	0	Yes	No
WAP-3S	Cobalt, Total	Dixon	21	0	0.219	highest value 0.0018 is an outlier	0.99	No	NA
WAP-4S	Cobalt, Total	Dixon	21	0	0.886	highest value 0.0093 is an outlier	0	Yes	No
WAP-5S	Cobalt, Total	Dixon	21	0	0.370	lowest value 0.0016 is an outlier	0.26	No	NA
CCR-AP-7	Fluoride	Dixon	24	0	0.460	highest value 0.72 is an outlier	0.043	Yes	No
WAP-1	Fluoride	Dixon	21	0	0.552	highest value 2 is an outlier	0.0094	Yes	No
WAP-2RR	Fluoride	Dixon	21	0	0.200	highest value 0.4 is an outlier	0.88	No	NA
WAP-3S	Fluoride	Dixon	21	0	0.176	lowest value 0.24 is an outlier	0.73	No	NA
WAP-4S	Fluoride	Dixon	21	0	0.357	lowest value 0.11 is an outlier	0.3	No	NA
WAP-5S	Fluoride	Dixon	21	1	0.548	highest value 0.21 is an outlier	0.011	Yes	No
CCR-AP-7	Lead, Total	Dixon	25	11	0.605	highest value 0.02 is an outlier	0	Yes	No
WAP-1	Lead, Total	Dixon	21	0	0.399	highest value 0.035 is an outlier	0.18	No	NA
WAP-2RR	Lead, Total	Dixon	21	13	0.769	highest value 0.0064 is an outlier	0	Yes	No
WAP-3S	Lead, Total	Dixon	21	7	0.500	highest value 0.0027 is an outlier	0.033	Yes	No
WAP-4S	Lead, Total	Dixon	21	17	0.840	highest value 0.0015 is an outlier	0	Yes	No
WAP-5S	Lead, Total	Dixon	21	19	1.000	highest value 0.0015 is an outlier	0	Yes	No
CCR-AP-7	Lithium, Total	Dixon	25	0	0.635	highest value 0.039 is an outlier	0	Yes	No
WAP-1	Lithium, Total	Dixon	21	0	0.294	highest value 0.027 is an outlier	0.56	No	NA
WAP-2RR	Lithium, Total	Dixon	21	0	0.182	highest value 0.06 is an outlier	0.77	No	NA

Rosner or Dixon Test for Outliers (R programming, package = outliers, version 0.15, function = dixon.test or rosnerTest, non-detects substituted by 0.5*reporting limit)

Location	Constituent	Outlier Test	n	n, non-detects	statistic	Alternative Hypothesis	p-value	Statistical Outlier (significance level = 0.05)	Outlier Removed
WAP-3S	Lithium, Total	Dixon	21	0	0.250	highest value 0.12 is an outlier	0.81	No	NA
WAP-4S	Lithium, Total	Dixon	21	8	0.207	highest value 0.017 is an outlier	0.92	No	NA
WAP-5S	Lithium, Total	Dixon	21	13	0.898	highest value 0.025 is an outlier	0	Yes	No
CCR-AP-7	Mercury, Total	Dixon	22	21	1.000	highest value 0.00032 is an outlier	0	Yes	No
WAP-1	Mercury, Total	Dixon	19	19	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-2RR	Mercury, Total	Dixon	19	19	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-3S	Mercury, Total	Dixon	19	19	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-4S	Mercury, Total	Dixon	20	20	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-5S	Mercury, Total	Dixon	19	19	All results are non-detect	Not Evaluated	NA	NA	NA
CCR-AP-7	Molybdenum, Total	Dixon	25	1	0.410	highest value 0.013 is an outlier	0.093	No	NA
WAP-1	Molybdenum, Total	Dixon	21	4	0.098	highest value 0.0028 is an outlier	0.28	No	NA
WAP-2RR	Molybdenum, Total	Dixon	21	0	0.469	highest value 0.16 is an outlier	0.062	No	NA
WAP-3S	Molybdenum, Total	Dixon	21	0	0.283	highest value 1.5 is an outlier	0.62	No	NA
WAP-4S	Molybdenum, Total	Dixon	21	0	0.659	lowest value 0.00078 is an outlier	0	Yes	No
WAP-5S	Molybdenum, Total	Dixon	21	7	0.995	highest value 0.4 is an outlier	0	Yes	No
CCR-AP-7	Radium-226 & 228	Dixon	22	7	0.287	highest value 1.72 is an outlier	0.57	No	NA
WAP-1	Radium-226 & 228	Dixon	17	4	0.592	highest value 4.74 is an outlier	0.014	Yes	No
WAP-2RR	Radium-226 & 228	Dixon	18	10	0.547	highest value 2.15 is an outlier	0.027	Yes	No
WAP-3S	Radium-226 & 228	Dixon	17	6	0.104	lowest value 0.061 is an outlier	0.22	No	NA
WAP-4S	Radium-226 & 228	Dixon	18	12	0.442	highest value 1.86 is an outlier	0.16	No	NA
WAP-5S	Radium-226 & 228	Dixon	18	12	0.502	highest value 1.49 is an outlier	0.065	No	NA
CCR-AP-7	Selenium, Total	Dixon	23	20	1.000	lowest value 0.00035 is an outlier	0	Yes	No
WAP-1	Selenium, Total	Dixon	19	17	1.000	lowest value 0.0018 is an outlier	0	Yes	No
WAP-2RR	Selenium, Total	Dixon	19	11	0.261	highest value 0.0071 is an outlier	0.84	No	NA
WAP-3S	Selenium, Total	Dixon	19	19	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-4S	Selenium, Total	Dixon	19	19	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-5S	Selenium, Total	Dixon	19	19	All results are non-detect	Not Evaluated	NA	NA	NA
CCR-AP-7	Thallium, Total	Dixon	25	21	0.548	highest value 0.001 is an outlier	0	Yes	No
WAP-1	Thallium, Total	Dixon	21	9	0.573	highest value 0.001 is an outlier	0.0018	Yes	No
WAP-2RR	Thallium, Total	Dixon	21	11	0.546	highest value 0.001 is an outlier	0.012	Yes	No
WAP-3S	Thallium, Total	Dixon	21	21	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-4S	Thallium, Total	Dixon	21	21	All results are non-detect	Not Evaluated	NA	NA	NA
WAP-5S	Thallium, Total	Dixon	21	19	1.000	highest value 0.001 is an outlier	0	Yes	No

Table A-4. Results of Mann Kendall and Thiel Sen Trend Tests, Assessment Monitoring

		Mann Kendall Trends		Secular Trend Evaluation for All Data										Secular Trend Evaluation for Recent Data (subset of 12 most recent data points)									
				Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)							Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)			Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)								Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)		
Location	Constituent	Trends, All Data	Trends, Recent Data	n	n, detected results	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	Intercept	Sen Slope in Rate of Change Per Year	n	n, detected results	recent data date range	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	Intercept	Sen Slope in Rate of Change Per Year
CCR-AP-7	Antimony, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	25	3	0.359	NA	NA	NA	NA	NA	NA	NA	12	1	2020-02-19 to 2024-11-15	0.396	NA	NA	NA	NA	NA	NA	NA
WAP-1	Antimony, Total	Stable	No Trend	21	11	0.342	-0.167	0.336	66.4	-31	NA	0.001	NA	12	9	2019-10-28 to 2024-11-13	0.408	0.326	0.167	83.3	21	NA	0.000682	NA
WAP-2RR	Antimony, Total	Not Evaluated - Only one detected result.	Not Evaluated - Only one detected result.	21	1	0.304	NA	NA	NA	NA	NA	NA	NA	12	1	2019-10-28 to 2024-11-13	0.381	NA	NA	NA	NA	NA	NA	NA
WAP-3S	Antimony, Total	Not Evaluated - Only one detected result.	Not Evaluated - Only one detected result.	21	1	0.341	NA	NA	NA	NA	NA	NA	NA	12	1	2019-10-28 to 2024-11-13	0.443	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Antimony, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	1.32	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-25 to 2024-11-12	1.38	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Antimony, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.304	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-25 to 2024-11-12	0.385	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Arsenic, Total	Decreasing	Stable	25	25	0.727	-0.376	0.00944	99.1	-112	-1.752e-06	0.00813	-0.0006395	12	12	2020-02-19 to 2024-11-15	0.96	-0.171	0.489	51.1	-11	NA	0.004721	NA
WAP-1	Arsenic, Total	Stable	Stable	21	21	0.763	-0.129	0.432	56.8	-27	NA	0.005804	NA	12	12	2019-10-28 to 2024-11-13	0.81	-0.364	0.115	88.5	-24	NA	0.007502	NA
WAP-2RR	Arsenic, Total	Increasing	No Trend	21	19	1.11	0.339	0.0345	96.5	71	3.336e-07	0.0007873	0.0001218	12	11	2019-10-28 to 2024-11-13	1.01	0.321	0.169	83.1	21	NA	0.0007852	NA
WAP-3S	Arsenic, Total	Decreasing	No Trend	21	17	0.606	-0.346	0.0317	96.8	-72	-1.062e-06	0.002983	-0.0003877	12	8	2019-10-28 to 2024-11-13	0.866	0.0155	1	0	1	NA	0.0017	NA
WAP-4S	Arsenic, Total	Increasing	No Trend	21	21	0.895	0.51	0.00149	99.9	106	1.762e-06	0.003162	0.0006433	12	12	2019-10-25 to 2024-11-12	0.804	0.375	0.111	88.9	24	NA	0.0045	NA
WAP-5S	Arsenic, Total	No Trend	No Trend	21	16	0.987	0.144	0.38	62	30	NA	0.0006427	NA	12	8	2019-10-25 to 2024-11-12	0.944	0.229	0.336	66.4	15	NA	0.0005357	NA
CCR-AP-7	Barium, Total	Decreasing	Stable	25	25	0.222	-0.374	0.0124	98.8	-107	-1.498e-05	0.1462	-0.005466	12	12	2020-02-19 to 2024-11-15	0.247	-0.24	0.327	67.3	-15	NA	0.1172	NA
WAP-1	Barium, Total	No Trend	Probably Decreasing	21	21	0.326	0.063	0.716	28.4	13	NA	0.444	NA	12	12	2019-10-28 to 2024-11-13	0.317	-0.438	0.0612	93.9	-28	NA	0.5551	NA
WAP-2RR	Barium, Total	Stable	No Trend	21	21	0.377	-0.058	0.739	26.1	-12	NA	0.04116	NA	12	12	2019-10-28 to 2024-11-13	0.447	0.326	0.167	83.3	21	NA	0.03022	NA
WAP-3S	Barium, Total	Decreasing	No Trend	21	21	0.81	-0.406	0.0112	98.9	-85	-8.72e-05	0.2121	-0.03183	12	12	2019-10-28 to 2024-11-13	1.22	-0.107	0.68	32	-7	NA	0.07487	NA
WAP-4S	Barium, Total	Decreasing	Stable	21	21	0.149	-0.423	0.00907	99.1	-87	-5.055e-06	0.05958	-0.001845	12	12	2019-10-25 to 2024-11-12	0.131	-0.0788	0.781	21.9	-5	NA	0.05354	NA
WAP-5S	Barium, Total	Decreasing	Decreasing	21	21	0.141	-0.618	0.000144	100	-126	-6.198e-06	0.05697	-0.002262	12	12	2019-10-25 to 2024-11-12	0.138	-0.485	0.0413	95.9	-30	-5.418e-06	0.05305	-0.001978
CCR-AP-7	Beryllium, Total	No Trend	Not Evaluated - Only one detected result.	25	7	0.395	0.153	0.349	65.1	34	NA	0.0005	NA	12	1	2020-02-19 to 2024-11-15	0.203	NA	NA	NA	NA	NA	NA	NA
WAP-1	Beryllium, Total	No Trend	No Trend	21	14	0.59	0.0939	0.582	41.8	19	NA	0.0004899	NA	12	6	2019-10-28 to 2024-11-13	0.483	0.132	0.617	38.3	8	NA	0.0005	NA
WAP-2RR	Beryllium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	21	2	0.17	NA	NA	NA	NA	NA	NA	NA	12	1	2019-10-28 to 2024-11-13	0.167	NA	NA	NA	NA	NA	NA	NA
WAP-3S	Beryllium, Total	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	21	1	0.228	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-28 to 2024-11-13	0.151	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Beryllium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.112	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-25 to 2024-11-12	0.151	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Beryllium, Total	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	21	1	0.221	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-25 to 2024-11-12	0.151	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Cadmium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	25	3	0.259	NA	NA	NA	NA	NA	NA	NA	12	1	2020-02-19 to 2024-11-15	0.294	NA	NA	NA	NA	NA	NA	NA
WAP-1	Cadmium, Total	No Trend	No Trend	21	9	0.338	0.173	0.329	67.1	30	NA	0.0005	NA	12	4	2019-10-28 to 2024-11-13	0.288	0.0399	0.934	6.6	2	NA	0.0005	NA
WAP-2RR	Cadmium, Total	Decreasing	Probably Decreasing	21	19	0.363	-0.435	0.00702	99.3	-90	-7.594e-08	0.0004873	-2.772e-05	12	10	2019-10-28 to 2024-11-13	0.247	-0.431	0.0629	93.7	-28	NA	0.000509	NA
WAP-3S	Cadmium, Total	No Trend	Stable	21	12	0.475	0.0374	0.849	15.1	7	NA	0.00024	NA	12	4	2019-10-28 to 2024-11-13	0.429	-0.319	0.217	78.3	-16	NA	0.0005	NA
WAP-4S	Cadmium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Decreasing	21	5	0.34	NA	NA	NA	NA	NA	NA	NA	12	3	2019-10-25 to 2024-11-12	0.388	-0.584	0.0229	97.7	-26	0	0.0005	0
WAP-5S	Cadmium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	21	2	0.247	NA	NA	NA	NA	NA	NA	NA	12	2	2019-10-25 to 2024-11-12	0.339	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Chromium, Total	No Trend	Not Evaluated - Majority of data (>75%) non-detect.	25	11	1.26	0.0995	0.52	48	28	NA	0.0018	NA	12	2	2020-02-19 to 2024-11-15	0.723	NA	NA	NA	NA	NA	NA	NA
WAP-1	Chromium, Total	Stable	Stable	21	20	0.954	-0.245	0.131	86.9	-51	NA	0.01265	NA	12	12	2019-10-28 to 2024-11-13	0.739	-0.321	0.169	83.1	-21	NA	0.01067	NA
WAP-2RR	Chromium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	21	3	0.733	NA	NA	NA	NA	NA	NA	NA	12	2	2019-10-28 to 2024-11-13	0.694	NA	NA	NA	NA	NA	NA	NA

Note:
Mann Kendall Trends are classified based on Aziz (2003) guidance. Thiel-Sen slope only calculated for groups with increasing or decreasing trends. Units = milligrams per liter.

		Mann Kendall Trends		Secular Trend Evaluation for All Data										Secular Trend Evaluation for Recent Data (subset of 12 most recent data points)									
				Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)							Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)			Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)								Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)		
Location	Constituent	Trends, All Data	Trends, Recent Data	n	n, detected results	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	Intercept	Sen Slope in Rate of Change Per Year	n	n, detected results	recent data date range	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	Intercept	Sen Slope in Rate of Change Per Year
WAP-3S	Chromium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	21	3	0.654	NA	NA	NA	NA	NA	NA	NA	12	2	2019-10-28 to 2024-11-13	0.623	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Chromium, Total	Not Evaluated - Only one detected result.	Not Evaluated - No detected results.	21	1	0.704	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-25 to 2024-11-12	0.722	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Chromium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.699	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-25 to 2024-11-12	0.722	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Cobalt, Total	Decreasing	No Trend	25	23	1.54	-0.419	0.00375	99.6	-125	-5.854e-07	0.001876	-0.0002137	12	10	2020-02-19 to 2024-11-15	1.41	-0.121	0.631	36.9	-8	NA	0.0006804	NA
WAP-1	Cobalt, Total	Stable	Stable	21	21	0.955	-0.215	0.184	81.6	-45	NA	0.005217	NA	12	12	2019-10-28 to 2024-11-13	0.779	-0.364	0.115	88.5	-24	NA	0.005007	NA
WAP-2RR	Cobalt, Total	Stable	Stable	21	21	0.801	-0.145	0.38	62	-30	NA	0.0023	NA	12	12	2019-10-28 to 2024-11-13	0.925	-0.0308	0.945	5.5	-2	NA	0.00216	NA
WAP-3S	Cobalt, Total	No Trend	Stable	21	21	0.483	0.158	0.333	66.7	33	NA	0.0006362	NA	12	12	2019-10-28 to 2024-11-13	0.392	-0.168	0.492	50.8	-11	NA	0.001196	NA
WAP-4S	Cobalt, Total	Stable	Decreasing	21	21	0.77	-0.0541	0.761	23.9	-11	NA	0.0018	NA	12	12	2019-10-25 to 2024-11-12	0.136	-0.593	0.0118	98.8	-37	-2.753e-07	0.002084	-0.0001005
WAP-5S	Cobalt, Total	Decreasing	Stable	21	21	0.278	-0.421	0.00855	99.1	-88	-1.263e-06	0.00836	-0.0004611	12	12	2019-10-25 to 2024-11-12	0.246	-0.351	0.13	87	-23	NA	0.008095	NA
CCR-AP-7	Fluoride	Increasing	No Trend	24	24	0.38	0.371	0.0129	98.7	101	5.431e-05	0.2459	0.01982	12	12	2020-02-19 to 2024-11-15	0.356	0.26	0.271	72.9	17	NA	0.301	NA
WAP-1	Fluoride	No Trend	No Trend	21	21	1.01	0.165	0.317	68.3	34	NA	0.2739	NA	12	12	2019-10-28 to 2024-11-13	0.974	0.0606	0.837	16.3	4	NA	0.2803	NA
WAP-2RR	Fluoride	Increasing	No Trend	21	21	0.327	0.513	0.00135	99.9	107	7.028e-05	0.1705	0.02565	12	12	2019-10-28 to 2024-11-13	0.193	0.351	0.13	87	23	NA	0.2504	NA
WAP-3S	Fluoride	Stable	Stable	21	21	0.29	-0.124	0.45	55	-26	NA	0.538	NA	12	12	2019-10-28 to 2024-11-13	0.339	-0.107	0.68	32	-7	NA	0.5315	NA
WAP-4S	Fluoride	No Trend	No Trend	21	21	0.214	0.117	0.485	51.5	24	NA	0.2082	NA	12	12	2019-10-25 to 2024-11-12	0.194	0.295	0.214	78.6	19	NA	0.181	NA
WAP-5S	Fluoride	Stable	No Trend	21	20	0.369	-0.169	0.303	69.7	-35	NA	0.1045	NA	12	11	2019-10-25 to 2024-11-12	0.325	0.229	0.336	66.4	15	NA	0.07453	NA
CCR-AP-7	Lead, Total	Decreasing	No Trend	25	14	1.69	-0.309	0.042	95.8	-85	-2.695e-07	0.001279	-9.835e-05	12	4	2020-02-19 to 2024-11-15	1.42	-0.148	0.588	41.2	-8	NA	0.0005	NA
WAP-1	Lead, Total	Stable	Stable	21	21	0.926	-0.163	0.319	68.1	-34	NA	0.01015	NA	12	12	2019-10-28 to 2024-11-13	0.706	-0.168	0.492	50.8	-11	NA	0.008404	NA
WAP-2RR	Lead, Total	No Trend	No Trend	21	8	1.55	0.036	0.862	13.8	6	NA	0.0005	NA	12	6	2019-10-28 to 2024-11-13	1.41	0.0862	0.768	23.2	5	NA	0.0005	NA
WAP-3S	Lead, Total	No Trend	Stable	21	14	0.802	0.0892	0.603	39.7	18	NA	0.0004342	NA	12	6	2019-10-28 to 2024-11-13	0.753	-0.329	0.175	82.5	-20	NA	0.0008563	NA
WAP-4S	Lead, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	21	4	0.502	NA	NA	NA	NA	NA	NA	NA	12	2	2019-10-25 to 2024-11-12	0.645	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Lead, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Majority of data (>75%) non-detect.	21	2	0.444	NA	NA	NA	NA	NA	NA	NA	12	2	2019-10-25 to 2024-11-12	0.574	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Lithium, Total	Decreasing	Stable	25	25	0.5	-0.417	0.00495	99.5	-120	-1.436e-06	0.01276	-0.000524	12	12	2020-02-19 to 2024-11-15	0.268	-0.156	0.533	46.7	-10	NA	0.01025	NA
WAP-1	Lithium, Total	Stable	Stable	21	21	0.493	-0.257	0.115	88.5	-53	NA	0.01093	NA	12	12	2019-10-28 to 2024-11-13	0.442	-0.364	0.115	88.5	-24	NA	0.01218	NA
WAP-2RR	Lithium, Total	Decreasing	Stable	21	21	0.466	-0.481	0.00274	99.7	-100	-1.081e-05	0.04177	-0.003944	12	12	2019-10-28 to 2024-11-13	0.358	-0.0153	1	0	-1	NA	0.0229	NA
WAP-3S	Lithium, Total	Increasing	Increasing	21	21	0.325	0.67	0.0000266	100	140	2.462e-05	0.05414	0.008986	12	12	2019-10-28 to 2024-11-13	0.247	0.462	0.0457	95.4	30	1.703e-05	0.07221	0.006217
WAP-4S	Lithium, Total	Decreasing	Stable	21	13	0.865	-0.439	0.00796	99.2	-87	-2.841e-06	0.007275	-0.001037	12	6	2019-10-25 to 2024-11-12	0.345	-0.0166	1	0	-1	NA	0.0025	NA
WAP-5S	Lithium, Total	Probably Decreasing	Stable	21	8	1.22	-0.295	0.0824	91.8	-56	NA	0.00262	NA	12	5	2019-10-25 to 2024-11-12	0.325	-0.083	0.775	22.5	-5	NA	0.0025	NA
CCR-AP-7	Mercury, Total	Not Evaluated - Only one detected result.	Not Evaluated - Only one detected result.	22	1	0.475	NA	NA	NA	NA	NA	NA	NA	12	1	2019-05-28 to 2024-11-15	0.562	NA	NA	NA	NA	NA	NA	NA
WAP-1	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.319	NA	NA	NA	NA	NA	NA	NA	12	0	2018-08-16 to 2024-11-13	0.385	NA	NA	NA	NA	NA	NA	NA
WAP-2RR	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.319	NA	NA	NA	NA	NA	NA	NA	12	0	2018-08-16 to 2024-11-13	0.385	NA	NA	NA	NA	NA	NA	NA
WAP-3S	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.319	NA	NA	NA	NA	NA	NA	NA	12	0	2018-08-16 to 2024-11-13	0.385	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	20	0	0.312	NA	NA	NA	NA	NA	NA	NA	12	0	2018-12-04 to 2024-11-12	0.385	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Mercury, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0.319	NA	NA	NA	NA	NA	NA	NA	12	0	2018-08-16 to 2024-11-12	0.385	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Molybdenum, Total	Decreasing	Stable	25	24	0.866	-0.698	0.00000143	100	-207	-1.611e-06	0.004788	-0.0005879	12	11	2020-02-19 to 2024-11-15	0.258	-0.173	0.487	51.3	-11	NA	0.001515	NA
WAP-1	Molybdenum, Total	Stable	No Trend	21	17	0.472	-0.0438	0.808	19.2	-9	NA	0.001424	NA	12	9	2019-10-28 to 2024-11-13	0.476	0.362	0.126	87.4	23	NA	0.001028	NA
WAP-2RR	Molybdenum, Total	Increasing	No Trend	21	21	0.542	0.458	0.00444	99.6	95	2.133e-05	0.03494	0.007786	12	12	2019-10-28 to 2024-11-13	0.344	0.125	0.628	37.2	8	NA	0.07046	NA
WAP-3S	Molybdenum, Total	Decreasing	Probably Decreasing	21	21	0.39	-0.364	0.0234	97.7	-76	-0.0002005	0.9839	-0.07317	12	12	2019-10-28 to 2024-11-13	0.383	-0.394	0.0865	91.3	-26	NA	0.9325	NA
WAP-4S	Molybdenum, Total	Increasing	Stable	21	21	0.266	0.479	0.00298	99.7	99	5.251e-05	0.404	0.01917	12	12	2019-10-25 to 2024-11-12	0.121	-0.0625	0.835	16.5	-4	NA	0.4761	NA
WAP-5S	Molybdenum, Total	Increasing	Increasing	21	14	4.25	0.463	0.00501	99.5	92	3.642e-07	0.0007121	0.0001329	12	6	2019-10-25 to 2024-11-12	0.486	0.557	0.0221	97.8	32	9.749e-07	0.0008586	0.0003558
CCR-AP-7	Radium-226 & 228	Stable	Increasing	22	15	0.609	-0.212	0.176	82.4	-49	NA	1.028	NA	12	5	2020-02-19 to 2024-11-15	0.596	0.606	0.00749	99.3	40	0.0003646	0.2239	0.1331
WAP-1	Radium-226 & 228	No Trend	Stable	17	13	0.784	0.229	0.216	78.4	31	NA	0.9969	NA	12	9	2019-10-28 to 2024-11-13	0.755	-0.0303	0.945	5.5	-2	NA	1.359	NA
WAP-2RR	Radium-226 & 228	No Trend	No Trend	18	8	1.15	0.085	0.649	35.1	13	NA	0.2593	NA	12	5	2019-10-28 to 2024-11-13	1.17	0.0606	0.837	16.3	4	NA	0.2658	NA

Note:

Mann Kendall Trends are classified based on Aziz (2003) guidance. Thiel-Sen slope only calculated for groups with increasing or decreasing trends. Units = milligrams per liter.

		Mann Kendall Trends		Secular Trend Evaluation for All Data										Secular Trend Evaluation for Recent Data (subset of 12 most recent data points)									
				Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)							Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)			Mann-Kendall Test (R programming, package = Kendall, version = 2.2.1, function = MannKendall, non-detects substituted by 0.5*reporting limit)								Thiel-Sen Test (R programming, package = trend, version = 1.1.6, function = sens.slope, non-detects substituted by 0.5*reporting limit)		
Location	Constituent	Trends, All Data	Trends, Recent Data	n	n, detected results	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	Intercept	Sen Slope in Rate of Change Per Year	n	n, detected results	recent data date range	Coefficient of Variance	Kendall's Tau	p-value	Confidence Factor	Kendall Score (S)	Sen Slope	Intercept	Sen Slope in Rate of Change Per Year
WAP-3S	Radium-226 & 228	Stable	Stable	17	11	0.597	-0.0441	0.837	16.3	-6	NA	0.7876	NA	12	7	2019-10-28 to 2024-11-13	0.649	-0.0909	0.732	26.8	-6	NA	0.8748	NA
WAP-4S	Radium-226 & 228	No Trend	No Trend	18	6	1.14	0.163	0.363	63.7	25	NA	0.1154	NA	12	4	2019-10-25 to 2024-11-12	1.14	0.182	0.451	54.9	12	NA	0.1311	NA
WAP-5S	Radium-226 & 228	No Trend	No Trend	18	6	1.09	0.229	0.198	80.2	35	NA	0.1253	NA	12	5	2019-10-25 to 2024-11-12	0.982	0.0303	0.945	5.5	2	NA	0.1899	NA
CCR-AP-7	Selenium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	23	3	0.245	NA	NA	NA	NA	NA	NA	NA	12	1	2019-05-28 to 2024-11-15	0.0343	NA	NA	NA	NA	NA	NA	NA
WAP-1	Selenium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - No detected results.	19	2	0.091	NA	NA	NA	NA	NA	NA	NA	12	0	2018-08-16 to 2024-11-13	0	NA	NA	NA	NA	NA	NA	NA
WAP-2RR	Selenium, Total	Probably Increasing	No Trend	19	8	0.498	0.321	0.0846	91.5	45	NA	0.0025	NA	12	8	2018-08-16 to 2024-11-13	0.51	0.272	0.261	73.9	17	NA	0.002411	NA
WAP-3S	Selenium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0	NA	NA	NA	NA	NA	NA	NA	12	0	2018-08-16 to 2024-11-13	0	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Selenium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0	NA	NA	NA	NA	NA	NA	NA	12	0	2018-08-16 to 2024-11-12	0	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Selenium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	19	0	0	NA	NA	NA	NA	NA	NA	NA	12	0	2018-08-16 to 2024-11-12	0	NA	NA	NA	NA	NA	NA	NA
CCR-AP-7	Thallium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - No detected results.	25	4	0.38	NA	NA	NA	NA	NA	NA	NA	12	0	2020-02-19 to 2024-11-15	0.266	NA	NA	NA	NA	NA	NA	NA
WAP-1	Thallium, Total	No Trend	No Trend	21	12	0.503	0.235	0.161	83.9	46	NA	0.0004139	NA	12	5	2019-10-28 to 2024-11-13	0.425	0.259	0.302	69.8	15	NA	0.0004856	NA
WAP-2RR	Thallium, Total	Increasing	Not Evaluated - Majority of data (>75%) non-detect.	21	10	0.607	0.474	0.00523	99.5	88	1.457e-07	0.0002239	5.319e-05	12	2	2019-10-28 to 2024-11-13	0.37	NA	NA	NA	NA	NA	NA	NA
WAP-3S	Thallium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.208	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-28 to 2024-11-13	0.266	NA	NA	NA	NA	NA	NA	NA
WAP-4S	Thallium, Total	Not Evaluated - No detected results.	Not Evaluated - No detected results.	21	0	0.208	NA	NA	NA	NA	NA	NA	NA	12	0	2019-10-25 to 2024-11-12	0.266	NA	NA	NA	NA	NA	NA	NA
WAP-5S	Thallium, Total	Not Evaluated - Majority of data (>75%) non-detect.	Not Evaluated - Only one detected result.	21	2	0.315	NA	NA	NA	NA	NA	NA	NA	12	1	2019-10-25 to 2024-11-12	0.331	NA	NA	NA	NA	NA	NA	NA

Note:

Mann Kendall Trends are classified based on Aziz (2003) guidance. Thiel-Sen slope only calculated for groups with increasing or decreasing trends. Units = milligrams per liter.

Table A-5. Upper Tolerance Limits (UTLs) & Updated Groundwater Protection Standards (GWPS)

		Interwell Background Data Characterization [a]												Groundwater Protection Standard (GWPS) Determination					UTL Calculation Details		
Constituent	Units	n	n, non-detects	max reporting limit	max detected value	mean	median	min sample date	max sample date	standard deviation	coefficient of variation	Mann Kendall trend	data distribution (Shapiro-Francia) [b]	normalizing data transformation (if any)	UTL	UTL Result Detection Status [c]	MCL/RSL	GWPS	GWPS Source	UTL calculation method	UTL calculation details	Minimum Coverage (%)
Antimony, Total	mg/L	44	30	0.005	0.002	0.00173	0.002	2016-06-10	2024-06-03	0.000762	0.441	Stable	Not normal (Interwell Background)	NA - Original Data	0.005	No	0.006	0.006	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Arsenic, Total	mg/L	44	0	NA	0.025	0.00672	0.005	2016-06-10	2024-06-03	0.00512	0.762	Probably Decreasing	Not normal (Interwell Background)	NA - Original Data	0.025	Yes	0.01	0.025	UTL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Barium, Total	mg/L	44	0	NA	0.99	0.304	0.175	2016-06-10	2024-06-03	0.227	0.747	No Trend	Not normal (Interwell Background)	NA - Original Data	0.99	Yes	2	2	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Beryllium, Total	mg/L	44	23	0.001	0.0012	0.000701	0.001	2016-06-10	2024-06-03	0.000369	0.526	No Trend	Not normal (Interwell Background)	NA - Original Data	0.0012	Yes	0.004	0.004	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Cadmium, Total	mg/L	44	33	0.001	0.00049	0.000806	0.001	2016-06-10	2024-06-03	0.000328	0.407	No Trend	Not normal (Interwell Background)	NA - Original Data	0.001	No	0.005	0.005	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Chromium, Total	mg/L	44	12	0.01	0.046	0.00816	0.005	2016-06-10	2024-06-03	0.00986	1.21	No Trend	Not normal (Interwell Background)	NA - Original Data	0.046	Yes	0.1	0.1	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Cobalt, Total	mg/L	44	2	0.002	0.019	0.00368	0.00165	2016-06-10	2024-06-03	0.00444	1.21	No Trend	Not normal (Interwell Background)	NA - Original Data	0.019	Yes	0.006	0.019	UTL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Fluoride	mg/L	43	0	NA	2	0.39	0.29	2016-08-12	2024-06-03	0.327	0.839	Increasing	Not normal (Interwell Background)	NA - Original Data	2	Yes	4	4	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.3
Lead, Total	mg/L	44	10	0.003	0.035	0.0064	0.0033	2016-06-10	2024-06-03	0.00811	1.27	No Trend	Not normal (Interwell Background)	NA - Original Data	0.035	Yes	0.015	0.035	UTL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Lithium, Total	mg/L	44	0	NA	0.039	0.0128	0.011	2016-06-10	2024-06-03	0.00632	0.493	Decreasing	Not normal (Interwell Background)	NA - Original Data	0.039	Yes	0.04	0.04	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Mercury, Total	mg/L	39	39	0.0005	0.00032	0.000215	0.0002	2016-06-10	2024-06-03	6.7e-05	0.311	All non-detect results.	Not normal (Interwell Background)	NA - Original Data	0.0005	No	0.002	0.002	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	92.6
Molybdenum, Total	mg/L	44	4	0.005	0.013	0.00288	0.00175	2016-06-10	2024-06-03	0.00257	0.891	Decreasing	Not normal (Interwell Background)	NA - Original Data	0.013	Yes	0.1	0.1	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4
Radium-226 & 228	pCi/L	37	0	1.45	4.74	1.13	1.02	2016-06-10	2024-06-03	0.795	0.703	No Trend	Not normal (Interwell Background)	NA - Original Data	4.74	Yes	5	5	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	92.2
Selenium, Total	mg/L	40	35	0.005	0.0028	0.00456	0.005	2016-06-10	2024-06-03	0.00121	0.266	Probably Increasing	Not normal (Interwell Background)	NA - Original Data	0.005	No	0.05	0.05	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	92.8
Thallium, Total	mg/L	44	28	0.002	0.00063	0.000784	0.001	2016-06-10	2024-06-03	0.000452	0.576	Increasing	Not normal (Interwell Background)	NA - Original Data	0.002	No	0.002	0.002	MCL/RSL	Non-Parametric Tolerance Limits (USEPA, 2009 - Chapter 17.2.2)	Maximum Value (ND = RL, Non-discriminatory of detection status)	93.4

Note:

[a] Interwell background datasets are analyte specific and include data collected from background wells (CCR-AP-7 and WAP-1). Interwell background datasets were re-tested for outliers, secular trends, and data normality. No outliers were removed.

[b] Parametric tolerance limit calculations were performed on normally distributed background data. If background data were not normally distributed, non-parametric tolerance limit calculations were performed.

[c] In some cases, the maximum value selected as the UTL is a non-detect result with an elevated reporting limit.

Units = mg/L, milligrams per liter. pCi/L = picocuries per liter.

Table A-6. Confidence Intervals & SSL Identification

			Confidence Interval (CI) Dataset						CI Calculation [a]				SSL Confirmation		Non-Parametric CI Statistics	
Location	Chemical	Units	n	max (Rank n)	min (Rank 1)	median	mean	standard deviation	CI calculation method	degrees of freedom	95% Confidence UCL	95% Confidence LCL	GWPS	LCL > GWPS?	bootstrap iterations	bootstrap median
WAP-3S	Lithium, Total	mg/L	21	0.12	0.033	0.079	0.0743	0.0242	Calculation of the Confidence Interval Around the Normal Mean (Parametric)	20	0.0853	0.0633	0.04	Yes, SSL	NA	NA
WAP-3S	Molybdenum, Total	mg/L	21	1.5	0.26	0.78	0.803	0.313	Calculation of the Confidence Interval Around the Normal Mean (Parametric)	20	0.945	0.66	0.10	Yes, SSL	NA	NA
WAP-4S	Molybdenum, Total	mg/L	21	0.58	0.00078	0.45	0.426	0.113	Bootstrap Calculation of the Confidence Interval Around the Median (Non-Parametric)	20	0.47	0.42	0.10	Yes, SSL	10000	0.46

Note:

Confidence intervals are calculated for analyte/well pairs with GWPS exceedances in the May 2024 dataset.

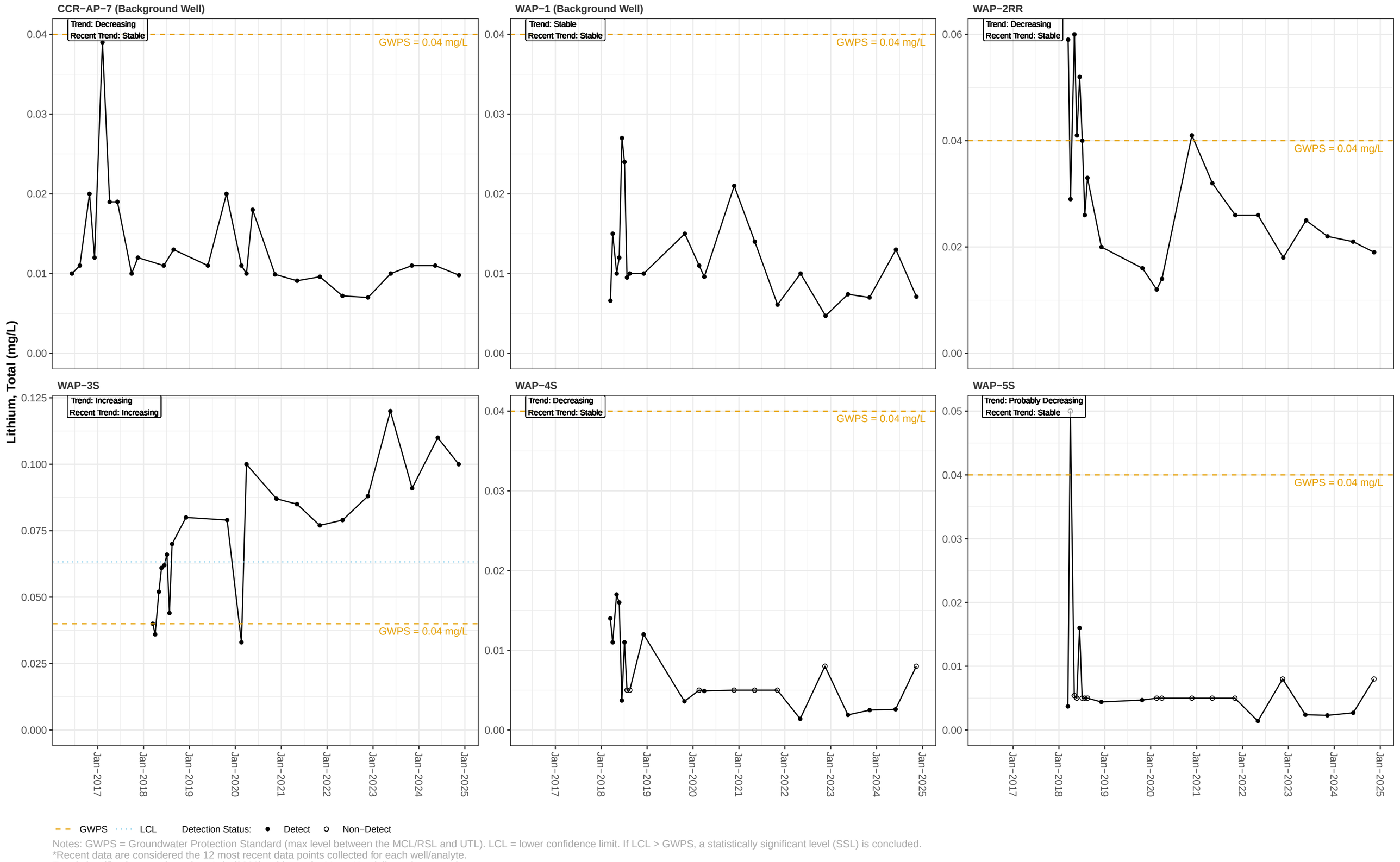
[a] The 95% lower confience level (LCL) is compared to the Groundwater Protection Standard (GWPS) to confirm a statistically significant level (SSL). The 95% upper confidence level (UCL) is also shown for purposes of comparison.

Table A-7. Groundwater Protection Standard (GWPS) Comparison Table

Location	Constituent	Units	Sample Date	Sample Result	Upper Threshold Limit (UTL)	GWPS	GWPS Exceedance	LCL	SSL Confirmed
WAP-3S	Lithium, Total	mg/L	2024-11-13	0.1	0.039	0.04	Yes	0.0633	Yes
WAP-3S	Molybdenum, Total	mg/L	2024-11-13	0.46	0.013	0.1	Yes	0.66	Yes
WAP-4S	Molybdenum, Total	mg/L	2024-11-12	0.45	0.013	0.1	Yes	0.42	Yes
WAP-2RR	Antimony, Total	mg/L	2024-11-13	0.002 U	0.005	0.006	No	NA	No
WAP-3S	Antimony, Total	mg/L	2024-11-13	0.002 U	0.005	0.006	No	NA	No
WAP-4S	Antimony, Total	mg/L	2024-11-12	0.002 U	0.005	0.006	No	NA	No
WAP-5S	Antimony, Total	mg/L	2024-11-12	0.002 U	0.005	0.006	No	NA	No
WAP-2RR	Arsenic, Total	mg/L	2024-11-13	0.0016 J	0.025	0.025	No	NA	No
WAP-3S	Arsenic, Total	mg/L	2024-11-13	0.005 U	0.025	0.025	No	NA	No
WAP-4S	Arsenic, Total	mg/L	2024-11-12	0.0061	0.025	0.025	No	NA	No
WAP-5S	Arsenic, Total	mg/L	2024-11-12	0.00086 J	0.025	0.025	No	NA	No
WAP-2RR	Barium, Total	mg/L	2024-11-13	0.057	0.99	2	No	NA	No
WAP-3S	Barium, Total	mg/L	2024-11-13	0.037	0.99	2	No	NA	No
WAP-4S	Barium, Total	mg/L	2024-11-12	0.044	0.99	2	No	NA	No
WAP-5S	Barium, Total	mg/L	2024-11-12	0.046	0.99	2	No	NA	No
WAP-2RR	Beryllium, Total	mg/L	2024-11-13	0.001 U	0.0012	0.004	No	NA	No
WAP-3S	Beryllium, Total	mg/L	2024-11-13	0.001 U	0.0012	0.004	No	NA	No
WAP-4S	Beryllium, Total	mg/L	2024-11-12	0.001 U	0.0012	0.004	No	NA	No
WAP-5S	Beryllium, Total	mg/L	2024-11-12	0.001 U	0.0012	0.004	No	NA	No
WAP-2RR	Cadmium, Total	mg/L	2024-11-13	0.00028 J	0.001	0.005	No	NA	No
WAP-3S	Cadmium, Total	mg/L	2024-11-13	0.00012 J	0.001	0.005	No	NA	No
WAP-4S	Cadmium, Total	mg/L	2024-11-12	0.00011 J	0.001	0.005	No	NA	No
WAP-5S	Cadmium, Total	mg/L	2024-11-12	0.001 U	0.001	0.005	No	NA	No
WAP-2RR	Chromium, Total	mg/L	2024-11-13	0.005 U	0.046	0.1	No	NA	No
WAP-3S	Chromium, Total	mg/L	2024-11-13	0.005 U	0.046	0.1	No	NA	No
WAP-4S	Chromium, Total	mg/L	2024-11-12	0.005 U	0.046	0.1	No	NA	No
WAP-5S	Chromium, Total	mg/L	2024-11-12	0.005 U	0.046	0.1	No	NA	No
WAP-2RR	Cobalt, Total	mg/L	2024-11-13	0.0013	0.019	0.019	No	NA	No
WAP-3S	Cobalt, Total	mg/L	2024-11-13	0.00078 J	0.019	0.019	No	NA	No
WAP-4S	Cobalt, Total	mg/L	2024-11-12	0.0015	0.019	0.019	No	NA	No
WAP-5S	Cobalt, Total	mg/L	2024-11-12	0.0065	0.019	0.019	No	NA	No
WAP-2RR	Fluoride	mg/L	2024-11-13	0.29	2	4	No	NA	No
WAP-3S	Fluoride	mg/L	2024-11-13	0.42	2	4	No	NA	No
WAP-4S	Fluoride	mg/L	2024-11-12	0.25	2	4	No	NA	No
WAP-5S	Fluoride	mg/L	2024-11-12	0.084 J	2	4	No	NA	No
WAP-2RR	Lead, Total	mg/L	2024-11-13	0.001 U	0.035	0.035	No	NA	No
WAP-3S	Lead, Total	mg/L	2024-11-13	0.001 U	0.035	0.035	No	NA	No
WAP-4S	Lead, Total	mg/L	2024-11-12	0.001 U	0.035	0.035	No	NA	No
WAP-5S	Lead, Total	mg/L	2024-11-12	0.001 U	0.035	0.035	No	NA	No
WAP-2RR	Lithium, Total	mg/L	2024-11-13	0.019	0.039	0.04	No	NA	No
WAP-4S	Lithium, Total	mg/L	2024-11-12	0.008 U	0.039	0.04	No	NA	No
WAP-5S	Lithium, Total	mg/L	2024-11-12	0.008 U	0.039	0.04	No	NA	No
WAP-2RR	Mercury, Total	mg/L	2024-11-13	0.0002 U	0.0005	0.002	No	NA	No
WAP-3S	Mercury, Total	mg/L	2024-11-13	0.0002 U	0.0005	0.002	No	NA	No
WAP-4S	Mercury, Total	mg/L	2024-11-12	0.0002 U	0.0005	0.002	No	NA	No
WAP-5S	Mercury, Total	mg/L	2024-11-12	0.0002 U	0.0005	0.002	No	NA	No
WAP-2RR	Molybdenum, Total	mg/L	2024-11-13	0.08	0.013	0.1	No	NA	No
WAP-5S	Molybdenum, Total	mg/L	2024-11-12	0.005 U	0.013	0.1	No	NA	No
WAP-2RR	Radium-226 & 228	pCi/L	2024-11-13	0.227 UJ	4.74	5	No	NA	No
WAP-3S	Radium-226 & 228	pCi/L	2024-11-13	0.122 U	4.74	5	No	NA	No
WAP-4S	Radium-226 & 228	pCi/L	2024-11-12	0.231 U	4.74	5	No	NA	No
WAP-5S	Radium-226 & 228	pCi/L	2024-11-12	0.0454 U	4.74	5	No	NA	No
WAP-2RR	Selenium, Total	mg/L	2024-11-13	0.004 J	0.005	0.05	No	NA	No
WAP-3S	Selenium, Total	mg/L	2024-11-13	0.005 U	0.005	0.05	No	NA	No
WAP-4S	Selenium, Total	mg/L	2024-11-12	0.005 U	0.005	0.05	No	NA	No
WAP-5S	Selenium, Total	mg/L	2024-11-12	0.005 U	0.005	0.05	No	NA	No
WAP-2RR	Thallium, Total	mg/L	2024-11-13	0.001 U	0.002	0.002	No	NA	No
WAP-3S	Thallium, Total	mg/L	2024-11-13	0.001 U	0.002	0.002	No	NA	No
WAP-4S	Thallium, Total	mg/L	2024-11-12	0.001 U	0.002	0.002	No	NA	No
WAP-5S	Thallium, Total	mg/L	2024-11-12	0.001 U	0.002	0.002	No	NA	No

Groundwater Protection Standard (GWPS) is the maximum value between the Upper Threshold Limit (UTL) and the Maximum Contaminant Level/Regional Screening Level (MCL/RSL). The 95% Lower Confidence Limit (LCL) is calculated if the event sample result exceeded the GWPS. If the LCL is greater than the GWPS, a Statistically Significant Level (SSL) is confirmed.

Assessment Monitoring Trend Analysis for Lithium, Total



Notes: GWPS = Groundwater Protection Standard (max level between the MCL/RSL and UTL). LCL = lower confidence limit. If LCL > GWPS, a statistically significant level (SSL) is concluded.
*Recent data are considered the 12 most recent data points collected for each well/analyte.
Trend classifications are based on Aziz (2003) guidance for Mann Kendall trend test results.

Assessment Monitoring Trend Analysis for Molybdenum, Total

CCR−AP−7 (Background Well)

Trend: Decreasing
Recent Trend: Stable

WAP−1 (Background Well)

Trend: Stable
Recent Trend: No Trend

WAP−2RR

Trend: Increasing
Recent Trend: No Trend

WAP−3S

Trend: Decreasing
Recent Trend: Probably Decreasing

WAP−4S

Trend: Increasing
Recent Trend: Stable

WAP−5S

Trend: Increasing
Recent Trend: Increasing

Molybdenum, Total (mg/L)

GWPS = 0.1 mg/L

GWPS − − LCL ····· Detection Status: ● Detect ○ Non−Detect

Notes: GWPS = Groundwater Protection Standard (max level between the MCL/RSL and UTL). LCL = lower confidence limit. If LCL > GWPS, a statistically significant level (SSL) is concluded.
*Recent data are considered the 12 most recent data points collected for each well/analyte.
Trend classifications are based on Aziz (2003) guidance for Mann Kendall trend test results.

APPENDIX B
Field Forms

Low-Flow Test Report:

Test Date / Time: 5/10/2024 11:20:07 AM
Project: Culley East (2)
Operator Name: Hayley Torres

Location Name: CCR-AP-7 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 24.6 ft** **Total Depth: 34.6 ft** **Initial Depth to Water: 4.3 ft**	**Pump Type: QED Bladder Pump** **Pump Intake From TOC: 29.6 ft** **Estimated Total Volume Pumped: 1221.25 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 25 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/10/2024 11:20 AM	00:00	7.00 pH	19.18 °C	1,056.6 µS/cm	4.74 mg/L	66.84 NTU	157.9 mV	131.06 cm	25.00 ml/min
5/10/2024 11:23 AM	03:00	6.99 pH	18.83 °C	1,063.3 µS/cm	3.87 mg/L	44.60 NTU	153.3 mV	131.06 cm	25.00 ml/min
5/10/2024 11:26 AM	06:00	6.98 pH	18.81 °C	1,076.7 µS/cm	3.46 mg/L	43.47 NTU	149.2 mV	131.06 cm	25.00 ml/min
5/10/2024 11:26 AM	06:51	6.97 pH	18.88 °C	1,078.4 µS/cm	3.36 mg/L	35.10 NTU	148.3 mV	131.06 cm	25.00 ml/min
5/10/2024 11:29 AM	09:51	6.97 pH	18.48 °C	1,077.8 µS/cm	3.15 mg/L	52.53 NTU	144.6 mV	131.06 cm	25.00 ml/min
5/10/2024 11:32 AM	12:51	6.97 pH	18.25 °C	1,073.9 µS/cm	3.01 mg/L	65.32 NTU	141.0 mV	131.06 cm	25.00 ml/min
5/10/2024 11:35 AM	15:51	6.96 pH	18.69 °C	1,087.4 µS/cm	2.91 mg/L	84.98 NTU	136.2 mV	131.06 cm	25.00 ml/min
5/10/2024 11:38 AM	18:51	6.96 pH	19.14 °C	1,092.0 µS/cm	2.81 mg/L	110.98 NTU	132.2 mV	131.06 cm	25.00 ml/min
5/10/2024 11:41 AM	21:51	6.96 pH	18.86 °C	1,072.3 µS/cm	3.01 mg/L	27.95 NTU	127.0 mV	131.06 cm	25.00 ml/min
5/10/2024 11:44 AM	24:51	6.96 pH	18.75 °C	1,070.2 µS/cm	2.81 mg/L	22.61 NTU	122.0 mV	131.06 cm	25.00 ml/min
5/10/2024 11:47 AM	27:51	6.95 pH	19.24 °C	1,067.7 µS/cm	2.69 mg/L	30.75 NTU	118.3 mV	131.06 cm	25.00 ml/min
5/10/2024 11:50 AM	30:51	6.94 pH	18.61 °C	1,084.2 µS/cm	2.71 mg/L	52.52 NTU	113.7 mV	131.06 cm	25.00 ml/min
5/10/2024 11:53 AM	33:51	6.95 pH	17.87 °C	1,075.5 µS/cm	3.34 mg/L	19.81 NTU	111.5 mV	131.06 cm	25.00 ml/min
5/10/2024 11:56 AM	36:51	6.95 pH	18.03 °C	1,079.4 µS/cm	2.89 mg/L	23.27 NTU	99.1 mV	131.06 cm	25.00 ml/min
5/10/2024 11:59 AM	39:51	6.95 pH	17.69 °C	1,071.0 µS/cm	2.81 mg/L	22.64 NTU	78.2 mV	131.06 cm	25.00 ml/min
5/10/2024 12:02 PM	42:51	6.96 pH	18.24 °C	1,081.4 µS/cm	2.79 mg/L	26.44 NTU	62.7 mV	131.06 cm	25.00 ml/min

5/10/2024 12:05 PM	45:51	6.96 pH	18.17 °C	1,071.6 µS/cm	2.72 mg/L	28.84 NTU	60.0 mV	131.06 cm	25.00 ml/min
5/10/2024 12:08 PM	48:51	6.96 pH	18.49 °C	1,075.0 µS/cm	2.72 mg/L	39.15 NTU	58.3 mV	131.06 cm	25.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/30/2024 2:34:59 PM
Project: Culley West (7)
Operator Name: Hayley Torres

Location Name: WAP-2RR **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 46 ft** **Total Depth: 56 ft** **Initial Depth to Water: 38.69 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 51.0 ft** **Estimated Total Volume Pumped: 10200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 340 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

2.7 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/30/2024 2:34 PM	00:00	6.54 pH	17.64 °C	860.89 µS/cm	0.42 mg/L	35.00 NTU	148.0 mV	38.69 ft	340.00 ml/min
5/30/2024 2:37 PM	03:00	6.55 pH	17.59 °C	861.11 µS/cm	0.31 mg/L	15.28 NTU	166.5 mV	38.69 ft	340.00 ml/min
5/30/2024 2:40 PM	06:00	6.55 pH	17.72 °C	860.78 µS/cm	0.25 mg/L	9.82 NTU	180.7 mV	38.69 ft	340.00 ml/min
5/30/2024 2:43 PM	09:00	6.56 pH	17.67 °C	860.74 µS/cm	0.21 mg/L	5.97 NTU	192.2 mV	38.69 ft	340.00 ml/min
5/30/2024 2:46 PM	12:00	6.56 pH	17.72 °C	861.02 µS/cm	0.18 mg/L	4.94 NTU	201.8 mV	38.69 ft	340.00 ml/min
5/30/2024 2:49 PM	15:00	6.57 pH	17.36 °C	860.52 µS/cm	0.16 mg/L	3.97 NTU	210.9 mV	38.69 ft	340.00 ml/min
5/30/2024 2:52 PM	18:00	6.57 pH	17.39 °C	861.86 µS/cm	0.14 mg/L	2.96 NTU	218.3 mV	38.69 ft	340.00 ml/min
5/30/2024 2:55 PM	21:00	6.58 pH	17.67 °C	861.74 µS/cm	0.13 mg/L	2.53 NTU	224.1 mV	38.69 ft	340.00 ml/min
5/30/2024 2:58 PM	24:00	6.59 pH	17.78 °C	860.49 µS/cm	0.12 mg/L	2.69 NTU	229.2 mV	38.69 ft	340.00 ml/min
5/30/2024 3:01 PM	27:00	6.60 pH	17.68 °C	862.11 µS/cm	0.11 mg/L	1.95 NTU	234.1 mV	38.69 ft	340.00 ml/min
5/30/2024 3:04 PM	30:00	6.61 pH	17.62 °C	862.14 µS/cm	0.11 mg/L	1.82 NTU	238.8 mV	38.69 ft	340.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/30/2024 1:36:31 PM
Project: Culley - West WAP-3S 5-20-24
Operator Name: Mykah Bertram

Location Name: WAP-3S **Latitude: 37.91381332** **Longitude: -87.33113074** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 60.3 ft** **Total Depth: 70.3 ft** **Initial Depth to Water: 36.80 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 65.3 ft** **Estimated Total Volume Pumped: 6000 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651965**

Test Notes:

1.6 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/30/2024 1:36 PM	00:00	6.51 pH	17.92 °C	1,051.9 µS/cm	0.24 mg/L	1.33 NTU	-97.9 mV	36.80 ft	200.00 ml/min
5/30/2024 1:39 PM	03:00	6.51 pH	17.87 °C	1,050.8 µS/cm	0.21 mg/L	1.16 NTU	-101.3 mV	36.80 ft	200.00 ml/min
5/30/2024 1:42 PM	06:00	6.51 pH	17.90 °C	1,051.2 µS/cm	0.19 mg/L	0.78 NTU	-103.1 mV	36.80 ft	200.00 ml/min
5/30/2024 1:45 PM	09:00	6.50 pH	17.92 °C	1,050.4 µS/cm	0.18 mg/L	0.43 NTU	-103.7 mV	36.80 ft	200.00 ml/min
5/30/2024 1:48 PM	12:00	6.50 pH	17.88 °C	1,051.2 µS/cm	0.17 mg/L	0.30 NTU	-104.2 mV	36.80 ft	200.00 ml/min
5/30/2024 1:51 PM	15:00	6.50 pH	18.07 °C	1,051.7 µS/cm	0.16 mg/L	0.30 NTU	-104.7 mV	36.80 ft	200.00 ml/min
5/30/2024 1:54 PM	18:00	6.50 pH	18.01 °C	1,050.5 µS/cm	0.16 mg/L	0.15 NTU	-104.5 mV	36.80 ft	200.00 ml/min
5/30/2024 1:57 PM	21:00	6.50 pH	17.82 °C	1,051.2 µS/cm	0.15 mg/L	0.11 NTU	-104.2 mV	36.80 ft	200.00 ml/min
5/30/2024 2:00 PM	24:00	6.52 pH	17.68 °C	1,051.0 µS/cm	0.14 mg/L	0.14 NTU	-104.3 mV	36.80 ft	200.00 ml/min
5/30/2024 2:03 PM	27:00	6.51 pH	17.70 °C	1,051.8 µS/cm	0.14 mg/L	0.17 NTU	-103.9 mV	36.80 ft	200.00 ml/min
5/30/2024 2:06 PM	30:00	6.52 pH	17.91 °C	1,051.5 µS/cm	0.13 mg/L	0.21 NTU	-104.0 mV	36.80 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/30/2024 12:06:03 PM
Project: Culley - West WAP-3D 5-20-24
Operator Name: Mykah Bertram

Location Name: WAP-3D **Latitude: 38.46951869** **Longitude: -87.27490133** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 72.7 ft** **Total Depth: 82.7 ft** **Initial Depth to Water: 36.85 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 77.7 ft** **Estimated Total Volume Pumped: 5400 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651965**

Test Notes:

1.4 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/30/2024 12:06 PM	00:00	6.41 pH	17.99 °C	1,149.8 µS/cm	0.20 mg/L	3.17 NTU	-62.2 mV	36.85 ft	200.00 ml/min
5/30/2024 12:09 PM	03:00	6.41 pH	17.84 °C	1,149.7 µS/cm	0.17 mg/L	2.37 NTU	-56.0 mV	36.85 ft	200.00 ml/min
5/30/2024 12:12 PM	06:00	6.42 pH	17.52 °C	1,150.1 µS/cm	0.15 mg/L	4.61 NTU	-52.7 mV	36.85 ft	200.00 ml/min
5/30/2024 12:15 PM	09:00	6.42 pH	17.60 °C	1,149.4 µS/cm	0.14 mg/L	1.97 NTU	-50.8 mV	36.85 ft	200.00 ml/min
5/30/2024 12:18 PM	12:00	6.42 pH	17.72 °C	1,152.1 µS/cm	0.14 mg/L	1.67 NTU	-49.7 mV	36.85 ft	200.00 ml/min
5/30/2024 12:21 PM	15:00	6.43 pH	17.69 °C	1,149.7 µS/cm	0.14 mg/L	3.53 NTU	-50.8 mV	36.85 ft	200.00 ml/min
5/30/2024 12:24 PM	18:00	6.43 pH	17.53 °C	1,150.0 µS/cm	0.13 mg/L	1.03 NTU	-49.8 mV	36.85 ft	200.00 ml/min
5/30/2024 12:27 PM	21:00	6.43 pH	17.49 °C	1,152.1 µS/cm	0.13 mg/L	0.95 NTU	-49.0 mV	36.85 ft	200.00 ml/min
5/30/2024 12:30 PM	24:00	6.43 pH	17.51 °C	1,150.8 µS/cm	0.13 mg/L	1.20 NTU	-47.9 mV	36.85 ft	200.00 ml/min
5/30/2024 12:33 PM	27:00	6.43 pH	17.60 °C	1,151.0 µS/cm	0.13 mg/L	1.14 NTU	-46.9 mV	36.85 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/31/2024 1:03:12 PM
Project: Culley West (10)
Operator Name: Hayley Torres

Location Name: WAP-4S **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 35.0 ft** **Total Depth: 45.0 ft** **Initial Depth to Water: 30.58 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 40.0 ft** **Estimated Total Volume Pumped: 7560 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 360 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

2.0 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/31/2024 1:03 PM	00:00	7.22 pH	18.37 °C	1,562.0 µS/cm	0.52 mg/L	25.11 NTU	-50.2 mV	30.58 ft	360.00 ml/min
5/31/2024 1:06 PM	03:00	7.23 pH	18.41 °C	1,573.5 µS/cm	0.18 mg/L	9.28 NTU	-59.4 mV	30.58 ft	360.00 ml/min
5/31/2024 1:09 PM	06:00	7.23 pH	18.35 °C	1,585.4 µS/cm	0.13 mg/L	4.82 NTU	-60.8 mV	30.58 ft	360.00 ml/min
5/31/2024 1:12 PM	09:00	7.22 pH	18.38 °C	1,594.4 µS/cm	0.11 mg/L	2.73 NTU	-61.2 mV	30.58 ft	360.00 ml/min
5/31/2024 1:15 PM	12:00	7.21 pH	18.36 °C	1,594.9 µS/cm	0.10 mg/L	4.93 NTU	-61.4 mV	30.58 ft	360.00 ml/min
5/31/2024 1:18 PM	15:00	7.19 pH	18.45 °C	1,603.3 µS/cm	0.09 mg/L	2.96 NTU	-60.2 mV	30.58 ft	360.00 ml/min
5/31/2024 1:21 PM	18:00	7.21 pH	18.40 °C	1,601.4 µS/cm	0.09 mg/L	5.20 NTU	-61.2 mV	30.58 ft	360.00 ml/min
5/31/2024 1:24 PM	21:00	7.18 pH	18.46 °C	1,604.7 µS/cm	0.08 mg/L	2.66 NTU	-59.9 mV	30.58 ft	360.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/22/2024 3:09:01 PM
Project: Culley West (2)
Operator Name: Hayley Torres

Location Name: WAP-4I **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 65.1 ft** **Total Depth: 75.1 ft** **Initial Depth to Water: 30.82 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 70.1 ft** **Estimated Total Volume Pumped: 6040 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 160 ml/min** **Final Draw Down: -0.01 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

1.6 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/22/2024 3:09 PM	00:00	7.46 pH	20.63 °C	355.45 µS/cm	2.92 mg/L	165.21 NTU	28.0 mV	29.82 ft	160.00 ml/min
5/22/2024 3:12 PM	03:00	7.63 pH	19.08 °C	338.23 µS/cm	1.39 mg/L	140.37 NTU	-27.6 mV	29.80 ft	160.00 ml/min
5/22/2024 3:15 PM	06:00	7.68 pH	18.98 °C	335.07 µS/cm	0.98 mg/L	72.67 NTU	-49.0 mV	29.78 ft	160.00 ml/min
5/22/2024 3:18 PM	09:00	7.68 pH	18.48 °C	333.56 µS/cm	0.74 mg/L	88.70 NTU	-58.0 mV	29.76 ft	160.00 ml/min
5/22/2024 3:21 PM	12:00	7.67 pH	18.70 °C	333.74 µS/cm	0.61 mg/L	76.34 NTU	-62.4 mV	29.75 ft	160.00 ml/min
5/22/2024 3:24 PM	15:00	7.66 pH	18.41 °C	330.79 µS/cm	0.51 mg/L	111.52 NTU	-64.9 mV	29.78 ft	160.00 ml/min
5/22/2024 3:27 PM	18:00	7.65 pH	18.31 °C	330.37 µS/cm	0.46 mg/L	140.41 NTU	-66.9 mV	29.81 ft	160.00 ml/min
5/22/2024 3:30 PM	21:00	7.66 pH	18.04 °C	330.95 µS/cm	0.63 mg/L	18.00 NTU	-59.3 mV	29.81 ft	160.00 ml/min
5/22/2024 3:37 PM	28:45	7.63 pH	17.73 °C	330.45 µS/cm	0.34 mg/L	86.69 NTU	-68.2 mV		160.00 ml/min
5/22/2024 3:40 PM	31:45	7.63 pH	18.35 °C	331.37 µS/cm	0.32 mg/L	6.74 NTU	-69.3 mV		160.00 ml/min
5/22/2024 3:43 PM	34:45	7.62 pH	18.65 °C	331.69 µS/cm	0.31 mg/L	1.00 NTU	-69.5 mV		160.00 ml/min
5/22/2024 3:46 PM	37:45	7.61 pH	18.53 °C	331.09 µS/cm	0.31 mg/L	0.95 NTU	-69.5 mV		160.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/22/2024 12:06:03 PM
Project: Culley West
Operator Name: Hayley Torres

Location Name: WAP-4D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 106.0 ft** **Total Depth: 116.0 ft** **Initial Depth to Water: 33.07 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 111.0 ft** **Estimated Total Volume Pumped: 1350 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 30 ml/min** **Final Draw Down: -0.62 ft ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

0.4 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/22/2024 12:06 PM	00:00	7.39 pH	24.73 °C	454.87 µS/cm	5.35 mg/L	61.62 NTU	57.5 mV	33.07 ft	30.00 ml/min
5/22/2024 12:09 PM	03:00	7.31 pH	24.77 °C	446.11 µS/cm	4.16 mg/L	29.70 NTU	60.0 mV	33.04 ft	30.00 ml/min
5/22/2024 12:12 PM	06:00	7.36 pH	25.63 °C	439.59 µS/cm	3.56 mg/L	11.50 NTU	56.7 mV	32.97 ft	30.00 ml/min
5/22/2024 12:15 PM	09:00	7.37 pH	26.12 °C	441.19 µS/cm	3.41 mg/L	2.52 NTU	50.0 mV	32.94 ft	30.00 ml/min
5/22/2024 12:18 PM	12:00	7.45 pH	26.32 °C	439.23 µS/cm	3.37 mg/L	1.30 NTU	32.7 mV	32.87 ft	30.00 ml/min
5/22/2024 12:21 PM	15:00	7.47 pH	26.46 °C	436.82 µS/cm	3.14 mg/L	1.29 NTU	-13.3 mV	32.80 ft	30.00 ml/min
5/22/2024 12:24 PM	18:00	7.47 pH	25.96 °C	436.26 µS/cm	2.03 mg/L	1.84 NTU	-64.1 mV	32.71 ft	30.00 ml/min
5/22/2024 12:27 PM	21:00	7.48 pH	23.57 °C	424.52 µS/cm	1.41 mg/L	6.41 NTU	-103.9 mV	32.68 ft	30.00 ml/min
5/22/2024 12:30 PM	24:00	7.49 pH	22.34 °C	429.73 µS/cm	1.00 mg/L	5.84 NTU	-121.3 mV	32.64 ft	30.00 ml/min
5/22/2024 12:33 PM	27:00	7.51 pH	22.76 °C	430.44 µS/cm	0.77 mg/L	14.83 NTU	-130.4 mV	32.59 ft	30.00 ml/min
5/22/2024 12:36 PM	30:00	7.52 pH	23.45 °C	435.45 µS/cm	0.78 mg/L	6.26 NTU	-131.9 mV	32.54 ft	30.00 ml/min
5/22/2024 12:39 PM	33:00	7.53 pH	25.16 °C	437.97 µS/cm	0.87 mg/L	3.69 NTU	-121.7 mV	32.51 ft	30.00 ml/min
5/22/2024 12:42 PM	36:00	7.51 pH	26.26 °C	436.58 µS/cm	0.87 mg/L	6.32 NTU	-131.1 mV	32.50 ft	30.00 ml/min
5/22/2024 12:45 PM	39:00	7.50 pH	26.35 °C	438.73 µS/cm	0.94 mg/L	6.76 NTU	-118.6 mV	32.49 ft	30.00 ml/min
5/22/2024 12:48 PM	42:00	7.50 pH	26.34 °C	440.55 µS/cm	0.98 mg/L	10.12 NTU	-112.7 mV	32.47 ft	30.00 ml/min
5/22/2024 12:51 PM	45:00	7.50 pH	26.51 °C	437.11 µS/cm	1.01 mg/L	9.68 NTU	-114.6 mV	32.45 ft	30.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/31/2024 2:24:05 PM
Project: Culley West (11)
Operator Name: Hayley Torres

Location Name: WAP-5S **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.1 ft** **Total Depth: 40.1 ft** **Initial Depth to Water: 29.58 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 35.1 ft** **Estimated Total Volume Pumped: 1620 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 90 ml/min** **Final Draw Down: 0.03 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

0.4 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/31/2024 2:24 PM	00:00	6.63 pH	21.16 °C	1,672.4 µS/cm	0.85 mg/L	2.10 NTU	165.8 mV	29.58 ft	90.00 ml/min
5/31/2024 2:27 PM	03:00	6.64 pH	21.22 °C	1,673.5 µS/cm	0.69 mg/L	1.41 NTU	163.1 mV	29.58 ft	90.00 ml/min
5/31/2024 2:30 PM	06:00	6.62 pH	21.15 °C	1,667.8 µS/cm	0.57 mg/L	1.03 NTU	164.6 mV	29.59 ft	90.00 ml/min
5/31/2024 2:33 PM	09:00	6.63 pH	21.37 °C	1,675.8 µS/cm	0.49 mg/L	3.49 NTU	163.9 mV	29.59 ft	90.00 ml/min
5/31/2024 2:36 PM	12:00	6.61 pH	21.33 °C	1,672.2 µS/cm	0.44 mg/L	0.84 NTU	166.8 mV	29.60 ft	90.00 ml/min
5/31/2024 2:39 PM	15:00	6.63 pH	21.53 °C	1,675.4 µS/cm	0.40 mg/L	0.80 NTU	166.9 mV	29.60 ft	90.00 ml/min
5/31/2024 2:42 PM	18:00	6.60 pH	21.55 °C	1,675.3 µS/cm	0.37 mg/L	0.80 NTU	168.9 mV	29.61 ft	90.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/31/2024 3:09:04 PM
Project: Culley West (12)
Operator Name: Hayley Torres

Location Name: WAP-5I **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 65.0 ft** **Total Depth: 75.0 ft** **Initial Depth to Water: 29.11 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 70.1 ft** **Estimated Total Volume Pumped: 17640 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 280 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

4.7 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/31/2024 3:09 PM	00:00	7.25 pH	16.79 °C	338.78 µS/cm	1.67 mg/L	11.65 NTU	85.6 mV	29.11 ft	280.00 ml/min
5/31/2024 3:12 PM	03:00	7.34 pH	17.03 °C	336.68 µS/cm	0.46 mg/L	5.40 NTU	-8.9 mV	29.11 ft	280.00 ml/min
5/31/2024 3:15 PM	06:00	7.37 pH	16.85 °C	335.74 µS/cm	0.24 mg/L	18.57 NTU	-23.6 mV	29.11 ft	280.00 ml/min
5/31/2024 3:18 PM	09:00	7.40 pH	16.82 °C	336.11 µS/cm	0.17 mg/L	45.25 NTU	-31.9 mV	29.10 ft	280.00 ml/min
5/31/2024 3:21 PM	12:00	7.41 pH	16.69 °C	334.12 µS/cm	0.15 mg/L	119.56 NTU	-32.0 mV	29.10 ft	280.00 ml/min
5/31/2024 3:24 PM	15:00	7.42 pH	16.86 °C	335.77 µS/cm	0.17 mg/L	161.53 NTU	-29.1 mV	29.10 ft	280.00 ml/min
5/31/2024 3:27 PM	18:00	7.42 pH	16.61 °C	334.80 µS/cm	0.18 mg/L	67.12 NTU	-31.8 mV	29.10 ft	280.00 ml/min
5/31/2024 3:30 PM	21:00	7.43 pH	16.58 °C	334.90 µS/cm	0.15 mg/L	91.98 NTU	-31.1 mV	29.09 ft	280.00 ml/min
5/31/2024 3:33 PM	24:00	7.45 pH	16.08 °C	334.18 µS/cm	0.12 mg/L	141.85 NTU	-35.3 mV	29.09 ft	280.00 ml/min
5/31/2024 3:36 PM	27:00	7.47 pH	16.20 °C	334.12 µS/cm	0.18 mg/L	118.05 NTU	-29.7 mV	29.08 ft	280.00 ml/min
5/31/2024 3:39 PM	30:00	7.45 pH	16.01 °C	334.37 µS/cm	0.10 mg/L	75.47 NTU	-35.6 mV	29.08 ft	280.00 ml/min
5/31/2024 3:42 PM	33:00	7.45 pH	16.06 °C	333.78 µS/cm	0.09 mg/L	75.78 NTU	-37.1 mV	29.08 ft	280.00 ml/min
5/31/2024 3:45 PM	36:00	7.44 pH	15.86 °C	334.99 µS/cm	0.09 mg/L	32.63 NTU	-39.9 mV	29.09 ft	280.00 ml/min
5/31/2024 3:48 PM	39:00	7.44 pH	16.03 °C	334.00 µS/cm	0.08 mg/L	25.33 NTU	-40.5 mV	29.09 ft	280.00 ml/min
5/31/2024 3:51 PM	42:00	7.44 pH	15.97 °C	333.78 µS/cm	0.08 mg/L	66.87 NTU	-38.4 mV	29.09 ft	280.00 ml/min
5/31/2024 3:54 PM	45:00	7.44 pH	15.95 °C	333.24 µS/cm	0.08 mg/L	57.54 NTU	-37.2 mV	29.09 ft	280.00 ml/min

5/31/2024 3:57 PM	48:00	7.44 pH	15.96 °C	334.22 µS/cm	0.08 mg/L	72.32 NTU	-38.1 mV	29.10 ft	280.00 ml/min
5/31/2024 4:00 PM	51:00	7.45 pH	16.16 °C	333.54 µS/cm	0.08 mg/L	85.01 NTU	-38.3 mV	29.10 ft	280.00 ml/min
5/31/2024 4:03 PM	54:00	7.45 pH	16.05 °C	333.50 µS/cm	0.08 mg/L	39.63 NTU	-37.7 mV	29.10 ft	280.00 ml/min
5/31/2024 4:06 PM	57:00	7.45 pH	16.10 °C	334.53 µS/cm	0.08 mg/L	21.50 NTU	-40.3 mV	29.10 ft	280.00 ml/min
5/31/2024 4:09 PM	01:00:00	7.45 pH	15.96 °C	333.03 µS/cm	0.08 mg/L	13.48 NTU	-39.5 mV	29.11 ft	280.00 ml/min
5/31/2024 4:12 PM	01:03:00	7.45 pH	16.08 °C	334.02 µS/cm	0.07 mg/L	7.94 NTU	-40.9 mV	29.11 ft	280.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/31/2024 4:45:11 PM
Project: Culley West (13)
Operator Name: Hayley Torres

Location Name: WAP-5D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 103.1 ft** **Total Depth: 113.1 ft** **Initial Depth to Water: 29.51 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 108.1 ft** **Estimated Total Volume Pumped: 1350 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 50 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

0.4 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/31/2024 4:45 PM	00:00	7.26 pH	22.21 °C	426.15 µS/cm	2.48 mg/L	8.40 NTU	-27.4 mV	29.51 ft	50.00 ml/min
5/31/2024 4:48 PM	03:00	7.32 pH	22.09 °C	425.30 µS/cm	2.68 mg/L	9.64 NTU	-48.9 mV	29.51 ft	50.00 ml/min
5/31/2024 4:51 PM	06:00	7.35 pH	22.14 °C	425.49 µS/cm	3.36 mg/L	92.81 NTU	-45.7 mV	29.51 ft	50.00 ml/min
5/31/2024 4:54 PM	09:00	7.35 pH	22.04 °C	426.01 µS/cm	2.45 mg/L	70.57 NTU	-66.6 mV	29.51 ft	50.00 ml/min
5/31/2024 4:57 PM	12:00	7.34 pH	22.05 °C	427.54 µS/cm	1.80 mg/L	39.47 NTU	-78.2 mV	29.51 ft	50.00 ml/min
5/31/2024 5:00 PM	15:00	7.36 pH	21.85 °C	427.74 µS/cm	1.50 mg/L	24.64 NTU	-85.4 mV	29.51 ft	50.00 ml/min
5/31/2024 5:03 PM	18:00	7.36 pH	22.02 °C	427.54 µS/cm	1.34 mg/L	20.68 NTU	-88.5 mV	29.51 ft	50.00 ml/min
5/31/2024 5:06 PM	21:00	7.36 pH	22.09 °C	428.13 µS/cm	1.20 mg/L	14.07 NTU	-94.3 mV	29.51 ft	50.00 ml/min
5/31/2024 5:09 PM	24:00	7.37 pH	21.77 °C	427.67 µS/cm	1.10 mg/L	10.75 NTU	-97.1 mV	29.51 ft	50.00 ml/min
5/31/2024 5:12 PM	27:00	7.36 pH	21.52 °C	425.86 µS/cm	1.02 mg/L	6.98 NTU	-97.1 mV	29.51 ft	50.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/31/2024 10:48:20 AM
Project: Culley West (9)
Operator Name: Hayley Torres

Location Name: WAP-6S **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 40.1 ft** **Total Depth: 50.1 ft** **Initial Depth to Water: 34.78 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 45.1 ft** **Estimated Total Volume Pumped: 8640 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 240 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

2.3 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/31/2024 10:48 AM	00:00	6.98 pH	18.87 °C	933.74 µS/cm	0.33 mg/L	41.54 NTU	131.1 mV	34.78 ft	240.00 ml/min
5/31/2024 10:51 AM	03:00	7.05 pH	19.04 °C	923.13 µS/cm	0.23 mg/L	32.17 NTU	86.9 mV	34.78 ft	240.00 ml/min
5/31/2024 10:54 AM	06:00	7.03 pH	18.99 °C	907.19 µS/cm	0.19 mg/L	29.97 NTU	77.3 mV	34.77 ft	240.00 ml/min
5/31/2024 10:57 AM	09:00	7.10 pH	19.10 °C	883.70 µS/cm	0.14 mg/L	26.66 NTU	78.1 mV	34.77 ft	240.00 ml/min
5/31/2024 11:00 AM	12:00	7.09 pH	19.09 °C	866.10 µS/cm	0.13 mg/L	24.51 NTU	87.0 mV	34.77 ft	240.00 ml/min
5/31/2024 11:03 AM	15:00	7.14 pH	19.16 °C	858.18 µS/cm	0.12 mg/L	20.92 NTU	88.9 mV	34.76 ft	240.00 ml/min
5/31/2024 11:06 AM	18:00	7.14 pH	19.19 °C	843.62 µS/cm	0.11 mg/L	21.14 NTU	96.6 mV	34.76 ft	240.00 ml/min
5/31/2024 11:09 AM	21:00	7.17 pH	19.28 °C	837.75 µS/cm	0.10 mg/L	19.22 NTU	104.8 mV	34.76 ft	240.00 ml/min
5/31/2024 11:12 AM	24:00	7.17 pH	19.27 °C	829.27 µS/cm	0.09 mg/L	15.65 NTU	115.4 mV	34.75 ft	240.00 ml/min
5/31/2024 11:15 AM	27:00	7.20 pH	19.35 °C	823.63 µS/cm	0.09 mg/L	13.49 NTU	125.3 mV	34.75 ft	240.00 ml/min
5/31/2024 11:18 AM	30:00	7.19 pH	19.38 °C	819.36 µS/cm	0.09 mg/L	8.35 NTU	137.7 mV	34.75 ft	240.00 ml/min
5/31/2024 11:21 AM	33:00	7.21 pH	19.41 °C	819.20 µS/cm	0.09 mg/L	11.55 NTU	148.7 mV	34.75 ft	240.00 ml/min
5/31/2024 11:24 AM	36:00	7.20 pH	19.46 °C	814.86 µS/cm	0.09 mg/L	8.82 NTU	160.1 mV	34.75 ft	240.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/23/2024 11:25:04 AM
Project: Culley West WAP-6 23May24
Operator Name: John A Magill Jr

Location Name: WAP-6I **Well Diameter: 2 ft** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 70.0 ft** **Total Depth: 80.0 ft** **Initial Depth to Water: 33.64 ft**	**Pump Type: Dedicated** **Tubing Type: Polyethylene** **Pump Intake From TOC: 75.0 ft** **Estimated Total Volume Pumped: 4200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

1.1 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
5/23/2024 11:25 AM	00:00	7.55 pH	46.12 °C	163.39 µS/cm	0.00 mg/L	8.50 NTU	-51.3 mV	33.64 ft	200.00 ml/min
5/23/2024 11:28 AM	03:00	7.56 pH	48.77 °C	157.81 µS/cm	0.00 mg/L	21.31 NTU	-55.9 mV	33.64 ft	200.00 ml/min
5/23/2024 11:31 AM	06:00	7.57 pH	48.80 °C	157.80 µS/cm	0.00 mg/L	30.02 NTU	-59.7 mV	33.64 ft	200.00 ml/min
5/23/2024 11:34 AM	09:00	7.57 pH	48.79 °C	157.66 µS/cm	0.00 mg/L	8.42 NTU	-62.0 mV	33.64 ft	200.00 ml/min
5/23/2024 11:37 AM	12:00	7.57 pH	48.70 °C	157.91 µS/cm	0.00 mg/L	10.31 NTU	-64.0 mV	33.64 ft	200.00 ml/min
5/23/2024 11:40 AM	15:00	7.58 pH	48.70 °C	158.50 µS/cm	0.00 mg/L	13.98 NTU	-66.1 mV	33.64 ft	200.00 ml/min
5/23/2024 11:43 AM	18:00	7.58 pH	48.61 °C	158.59 µS/cm	0.00 mg/L	13.70 NTU	-67.5 mV	33.64 ft	200.00 ml/min
5/23/2024 11:46 AM	21:00	7.57 pH	48.56 °C	158.77 µS/cm	0.00 mg/L	1.07 NTU	-68.4 mV	33.64 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/23/2024 1:13:33 PM
Project: Culley West WAP-6 23May24
Operator Name: John A Magill Jr

Location Name: WAP-6D **Latitude: 37.91304363** **Longitude: -87.33128559** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 105.6 ft** **Total Depth: 115.6 ft** **Initial Depth to Water: 38.00 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 110.6 ft** **Estimated Total Volume Pumped: 8100 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 300 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745288**

Test Notes:

2.1 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
5/23/2024 1:13 PM	00:00	7.55 pH	45.95 °C	178.24 µS/cm	0.06 mg/L	91.93 NTU	-91.9 mV	38.00 ft	300.00 ml/min
5/23/2024 1:16 PM	03:00	7.55 pH	47.86 °C	171.63 µS/cm	0.04 mg/L	49.56 NTU	-100.9 mV	38.00 ft	300.00 ml/min
5/23/2024 1:19 PM	06:00	7.54 pH	47.81 °C	170.90 µS/cm	0.02 mg/L	22.69 NTU	-108.6 mV	38.00 ft	300.00 ml/min
5/23/2024 1:22 PM	09:00	7.60 pH	47.85 °C	170.88 µS/cm	0.02 mg/L	5.11 NTU	-117.5 mV	38.00 ft	300.00 ml/min
5/23/2024 1:25 PM	12:00	7.60 pH	47.82 °C	171.04 µS/cm	0.02 mg/L	2.63 NTU	-121.4 mV	38.00 ft	300.00 ml/min
5/23/2024 1:28 PM	15:00	7.59 pH	47.70 °C	170.71 µS/cm	0.02 mg/L	0.69 NTU	-123.5 mV	38.00 ft	300.00 ml/min
5/23/2024 1:31 PM	18:00	7.58 pH	47.64 °C	170.05 µS/cm	0.01 mg/L	1.99 NTU	-124.4 mV	38.00 ft	300.00 ml/min
5/23/2024 1:34 PM	21:00	7.57 pH	47.72 °C	170.29 µS/cm	0.01 mg/L	15.33 NTU	-125.3 mV	38.00 ft	300.00 ml/min
5/23/2024 1:37 PM	24:00	7.61 pH	47.70 °C	170.63 µS/cm	0.01 mg/L	8.42 NTU	-128.2 mV	38.00 ft	300.00 ml/min
5/23/2024 1:40 PM	27:00	7.60 pH	47.61 °C	170.92 µS/cm	0.01 mg/L	0.26 NTU	-128.5 mV	38.00 ft	300.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/30/2024 12:15:17 PM
Project: Culley West (5)
Operator Name: Hayley Torres

Location Name: WAP-7S **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 50.2 ft** **Total Depth: 60.2 ft** **Initial Depth to Water: 36.85 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 55.2 ft** **Estimated Total Volume Pumped: 6050 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.01 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

1.6 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/30/2024 12:15 PM	00:00	9.73 pH	18.55 °C	1,182.6 µS/cm	2.82 mg/L	8.07 NTU	264.0 mV	36.85 ft	200.00 ml/min
5/30/2024 12:18 PM	03:00	10.08 pH	18.37 °C	1,241.0 µS/cm	0.94 mg/L	8.02 NTU	203.2 mV	36.85 ft	200.00 ml/min
5/30/2024 12:21 PM	06:15	10.11 pH	18.48 °C	1,236.2 µS/cm	4.74 mg/L	10.97 NTU	170.2 mV	36.85 ft	200.00 ml/min
5/30/2024 12:24 PM	09:15	10.18 pH	17.92 °C	1,254.3 µS/cm	0.38 mg/L	0.30 NTU	140.7 mV	36.85 ft	200.00 ml/min
5/30/2024 12:27 PM	12:15	10.19 pH	17.85 °C	1,259.1 µS/cm	0.29 mg/L	0.18 NTU	123.8 mV	36.85 ft	200.00 ml/min
5/30/2024 12:30 PM	15:15	10.18 pH	17.96 °C	1,258.2 µS/cm	0.25 mg/L	0.17 NTU	112.3 mV	36.86 ft	200.00 ml/min
5/30/2024 12:33 PM	18:15	10.18 pH	18.34 °C	1,259.0 µS/cm	0.22 mg/L	0.16 NTU	102.1 mV	36.86 ft	200.00 ml/min
5/30/2024 12:36 PM	21:15	10.18 pH	18.06 °C	1,256.1 µS/cm	0.20 mg/L	0.14 NTU	95.8 mV	36.86 ft	200.00 ml/min
5/30/2024 12:39 PM	24:15	10.18 pH	18.05 °C	1,258.2 µS/cm	0.19 mg/L	0.12 NTU	90.6 mV	36.86 ft	200.00 ml/min
5/30/2024 12:42 PM	27:15	10.18 pH	18.23 °C	1,258.7 µS/cm	0.18 mg/L	0.20 NTU	85.8 mV	36.86 ft	200.00 ml/min
5/30/2024 12:45 PM	30:15	10.17 pH	18.51 °C	1,255.8 µS/cm	0.18 mg/L	0.17 NTU	81.2 mV	36.86 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/30/2024 1:15:22 PM
Project: Culley West (6)
Operator Name: Hayley Torres

Location Name: WAP-7D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 68.6 ft** **Total Depth: 78.6 ft** **Initial Depth to Water: 36.62 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 73.6 ft** **Estimated Total Volume Pumped: 4320 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 240 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

1.1 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/30/2024 1:15 PM	00:00	7.53 pH	18.24 °C	2,249.0 µS/cm	3.54 mg/L	1.18 NTU	-98.1 mV	36.62 ft	240.00 ml/min
5/30/2024 1:18 PM	03:00	7.24 pH	17.62 °C	2,296.5 µS/cm	0.64 mg/L	1.06 NTU	-96.3 mV	36.62 ft	240.00 ml/min
5/30/2024 1:21 PM	06:00	7.21 pH	17.94 °C	2,297.0 µS/cm	0.29 mg/L	0.36 NTU	-89.5 mV	36.62 ft	240.00 ml/min
5/30/2024 1:24 PM	09:00	7.21 pH	18.01 °C	2,288.8 µS/cm	0.21 mg/L	0.35 NTU	-87.0 mV	36.62 ft	240.00 ml/min
5/30/2024 1:27 PM	12:00	7.21 pH	18.34 °C	2,289.8 µS/cm	0.18 mg/L	0.16 NTU	-85.8 mV	36.62 ft	240.00 ml/min
5/30/2024 1:30 PM	15:00	7.22 pH	18.30 °C	2,286.9 µS/cm	0.17 mg/L	0.21 NTU	-84.6 mV	36.62 ft	240.00 ml/min
5/30/2024 1:33 PM	18:00	7.22 pH	18.36 °C	2,284.7 µS/cm	0.16 mg/L	0.26 NTU	-83.3 mV	36.62 ft	240.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/31/2024 1:18:06 PM
Project: Culley - West WAP-8S 5-31-24
Operator Name: Mykah Bertram

Location Name: WAP-8S **Latitude: 37.9128803** **Longitude: -87.33096672** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 40.1 ft** **Total Depth: 50.1 ft** **Initial Depth to Water: 31.51 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 45.1 ft** **Estimated Total Volume Pumped: 8400 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 400 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651965**

Test Notes:

2.2 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/31/2024 1:18 PM	00:00	7.22 pH	18.02 °C	1,115.1 µS/cm	0.11 mg/L	39.24 NTU	-239.0 mV	31.51 ft	400.00 ml/min
5/31/2024 1:21 PM	03:00	7.34 pH	18.36 °C	1,128.6 µS/cm	0.07 mg/L	21.30 NTU	-249.2 mV	31.51 ft	400.00 ml/min
5/31/2024 1:24 PM	06:00	7.33 pH	18.09 °C	1,138.5 µS/cm	0.06 mg/L	13.97 NTU	-250.6 mV	31.51 ft	400.00 ml/min
5/31/2024 1:27 PM	09:00	7.33 pH	18.21 °C	1,138.8 µS/cm	0.05 mg/L	9.22 NTU	-251.1 mV	31.51 ft	400.00 ml/min
5/31/2024 1:30 PM	12:00	7.33 pH	18.21 °C	1,135.9 µS/cm	0.04 mg/L	5.42 NTU	-252.0 mV	31.51 ft	400.00 ml/min
5/31/2024 1:33 PM	15:00	7.33 pH	18.13 °C	1,143.4 µS/cm	0.04 mg/L	4.43 NTU	-252.3 mV	31.51 ft	400.00 ml/min
5/31/2024 1:36 PM	18:00	7.32 pH	18.17 °C	1,144.6 µS/cm	0.04 mg/L	3.03 NTU	-252.5 mV	31.51 ft	400.00 ml/min
5/31/2024 1:39 PM	21:00	7.32 pH	18.11 °C	1,144.7 µS/cm	0.04 mg/L	2.57 NTU	-252.3 mV	31.51 ft	400.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/31/2024 2:27:12 PM
Project: Culley - West WAP-8I 5-31-24
Operator Name: Mykah Bertram

Location Name: WAP-8I **Latitude: 37.91286189** **Longitude: -87.33096311** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 70.1 ft** **Total Depth: 80.1 ft** **Initial Depth to Water: 31.76 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 75.1 ft** **Estimated Total Volume Pumped: 10800 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 400 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651965**

Test Notes:

2.9 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/31/2024 2:27 PM	00:00	7.00 pH	18.79 °C	429.24 µS/cm	0.27 mg/L	24.51 NTU	-171.4 mV	31.76 ft	400.00 ml/min
5/31/2024 2:30 PM	03:00	7.01 pH	18.99 °C	428.10 µS/cm	0.16 mg/L	38.17 NTU	-170.0 mV	31.76 ft	400.00 ml/min
5/31/2024 2:33 PM	06:00	6.97 pH	18.82 °C	427.91 µS/cm	0.13 mg/L	0.49 NTU	-168.2 mV	31.76 ft	400.00 ml/min
5/31/2024 2:36 PM	09:00	6.92 pH	19.00 °C	427.70 µS/cm	0.11 mg/L	0.29 NTU	-165.0 mV	31.76 ft	400.00 ml/min
5/31/2024 2:39 PM	12:00	6.87 pH	19.06 °C	427.33 µS/cm	0.10 mg/L	0.54 NTU	-161.8 mV	31.76 ft	400.00 ml/min
5/31/2024 2:42 PM	15:00	6.81 pH	19.03 °C	427.98 µS/cm	0.10 mg/L	0.41 NTU	-158.4 mV	31.76 ft	400.00 ml/min
5/31/2024 2:45 PM	18:00	6.76 pH	19.08 °C	428.07 µS/cm	0.09 mg/L	0.37 NTU	-155.4 mV	31.76 ft	400.00 ml/min
5/31/2024 2:48 PM	21:00	6.72 pH	19.00 °C	427.67 µS/cm	0.09 mg/L	0.41 NTU	-152.8 mV	31.76 ft	400.00 ml/min
5/31/2024 2:51 PM	24:00	6.69 pH	19.07 °C	427.19 µS/cm	0.09 mg/L	0.35 NTU	-150.9 mV	31.76 ft	400.00 ml/min
5/31/2024 2:54 PM	27:00	6.66 pH	18.94 °C	427.76 µS/cm	0.08 mg/L	0.31 NTU	-149.6 mV	31.76 ft	400.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 6/3/2024 11:27:05 AM
Project: Culley West (14)
Operator Name: Hayley Torres

Location Name: WAP-8D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 97.0 ft** **Total Depth: 107.0 ft** **Initial Depth to Water: 33.75 ft**	**Pump Type: Dedicated** **Pump Intake From TOC: 102.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.03 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

1.0 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
6/3/2024 11:27 AM	00:00	7.33 pH	18.67 °C	457.10 µS/cm	0.60 mg/L	9.38 NTU	-68.7 mV	33.75 ft	200.00 ml/min
6/3/2024 11:30 AM	03:00	7.47 pH	18.69 °C	458.18 µS/cm	0.21 mg/L	12.11 NTU	-113.7 mV	33.75 ft	200.00 ml/min
6/3/2024 11:33 AM	06:00	7.51 pH	18.72 °C	457.77 µS/cm	0.12 mg/L	15.67 NTU	-127.5 mV	33.75 ft	200.00 ml/min
6/3/2024 11:36 AM	09:00	7.54 pH	18.71 °C	458.08 µS/cm	0.10 mg/L	16.49 NTU	-134.2 mV	33.76 ft	200.00 ml/min
6/3/2024 11:39 AM	12:00	7.53 pH	18.79 °C	457.42 µS/cm	0.08 mg/L	12.00 NTU	-137.2 mV	33.77 ft	200.00 ml/min
6/3/2024 11:42 AM	15:00	7.55 pH	18.97 °C	458.07 µS/cm	0.07 mg/L	11.62 NTU	-140.9 mV	33.77 ft	200.00 ml/min
6/3/2024 11:45 AM	18:00	7.52 pH	18.87 °C	457.40 µS/cm	0.06 mg/L	7.93 NTU	-140.6 mV	33.78 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/30/2024 3:33:17 PM
Project: Culley - West WAP-9S 5-30-24
Operator Name: Mykah Bertram

Location Name: WAP-9S **Latitude: 37.91293116** **Longitude: -87.33172672** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 54.7 ft** **Total Depth: 64.7 ft** **Initial Depth to Water: 41.00 ft**	**Pump Type: QED Bladder** **Pump Intake From TOC: 59.7 ft** **Estimated Total Volume Pumped: 12090 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651965**

Test Notes:

3.2 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/30/2024 3:33 PM	00:00	7.13 pH	20.00 °C	721.82 µS/cm	0.18 mg/L	88.14 NTU	-112.0 mV	41.00 ft	200.00 ml/min
5/30/2024 3:34 PM	01:39	7.21 pH	20.20 °C	719.45 µS/cm	0.14 mg/L	66.14 NTU	-119.0 mV	41.00 ft	200.00 ml/min
5/30/2024 3:36 PM	02:53	7.26 pH	20.14 °C	719.41 µS/cm	0.13 mg/L	50.36 NTU	-123.2 mV	41.00 ft	200.00 ml/min
5/30/2024 3:39 PM	06:27	7.34 pH	19.12 °C	724.34 µS/cm	0.08 mg/L	46.53 NTU	-130.0 mV	41.00 ft	200.00 ml/min
5/30/2024 3:42 PM	09:27	7.39 pH	18.93 °C	724.64 µS/cm	0.08 mg/L	37.87 NTU	-134.1 mV	41.00 ft	200.00 ml/min
5/30/2024 3:45 PM	12:27	7.42 pH	18.77 °C	725.38 µS/cm	0.06 mg/L	36.53 NTU	-136.2 mV	41.00 ft	200.00 ml/min
5/30/2024 3:48 PM	15:27	7.43 pH	19.13 °C	726.17 µS/cm	0.05 mg/L	37.65 NTU	-137.6 mV	41.00 ft	200.00 ml/min
5/30/2024 3:51 PM	18:27	7.43 pH	19.64 °C	728.12 µS/cm	0.04 mg/L	188.04 NTU	-130.8 mV	41.00 ft	200.00 ml/min
5/30/2024 3:54 PM	21:27	7.43 pH	19.53 °C	724.11 µS/cm	0.25 mg/L	83.13 NTU	-129.7 mV	41.00 ft	200.00 ml/min
5/30/2024 3:57 PM	24:27	7.41 pH	19.58 °C	723.67 µS/cm	0.04 mg/L	57.59 NTU	-135.5 mV	41.00 ft	200.00 ml/min
5/30/2024 4:00 PM	27:27	7.40 pH	19.55 °C	727.35 µS/cm	0.03 mg/L	62.32 NTU	-136.4 mV	41.00 ft	200.00 ml/min
5/30/2024 4:03 PM	30:27	7.39 pH	19.57 °C	729.42 µS/cm	0.02 mg/L	50.76 NTU	-136.9 mV	41.00 ft	200.00 ml/min
5/30/2024 4:06 PM	33:27	7.37 pH	19.54 °C	728.51 µS/cm	0.02 mg/L	52.25 NTU	-137.0 mV	41.00 ft	200.00 ml/min
5/30/2024 4:09 PM	36:27	7.36 pH	19.61 °C	730.71 µS/cm	0.01 mg/L	51.42 NTU	-136.2 mV	41.00 ft	200.00 ml/min
5/30/2024 4:12 PM	39:27	7.34 pH	19.56 °C	729.93 µS/cm	0.01 mg/L	34.19 NTU	-135.3 mV	41.00 ft	200.00 ml/min

5/30/2024 4:15 PM	42:27	7.32 pH	19.66 °C	730.61 µS/cm	0.01 mg/L	34.67 NTU	-134.7 mV	41.00 ft	200.00 ml/min
5/30/2024 4:18 PM	45:27	7.30 pH	19.40 °C	731.56 µS/cm	0.01 mg/L	25.49 NTU	-133.7 mV	41.00 ft	200.00 ml/min
5/30/2024 4:21 PM	48:27	7.29 pH	19.03 °C	731.26 µS/cm	0.00 mg/L	21.90 NTU	-133.2 mV	41.00 ft	200.00 ml/min
5/30/2024 4:24 PM	51:27	7.29 pH	18.90 °C	731.81 µS/cm	0.00 mg/L	16.60 NTU	-133.2 mV	41.00 ft	200.00 ml/min
5/30/2024 4:27 PM	54:27	7.28 pH	18.76 °C	730.80 µS/cm	0.00 mg/L	14.65 NTU	-133.6 mV	41.00 ft	200.00 ml/min
5/30/2024 4:30 PM	57:27	7.27 pH	18.88 °C	733.22 µS/cm	0.00 mg/L	16.80 NTU	-133.0 mV	41.00 ft	200.00 ml/min
5/30/2024 4:33 PM	01:00:27	7.26 pH	18.99 °C	734.97 µS/cm	0.00 mg/L	10.89 NTU	-131.8 mV	41.00 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/30/2024 4:00:06 PM
Project: Culley West (8)
Operator Name: Hayley Torres

Location Name: WAP-9I **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 79.7 ft** **Total Depth: 89.7 ft** **Initial Depth to Water: 41.79 ft**	**Pump Type: QED Bladder** **Pump Intake From TOC: 84.7 ft** **Estimated Total Volume Pumped: 9720 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 360 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651925**

Test Notes:

2.6 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/30/2024 4:00 PM	00:00	7.44 pH	18.95 °C	412.97 µS/cm	0.29 mg/L	3.10 NTU	-83.8 mV	41.79 ft	360.00 ml/min
5/30/2024 4:03 PM	03:00	7.47 pH	18.63 °C	413.10 µS/cm	0.18 mg/L	1.49 NTU	-94.2 mV	41.79 ft	360.00 ml/min
5/30/2024 4:06 PM	06:00	7.50 pH	18.49 °C	411.08 µS/cm	0.14 mg/L	0.91 NTU	-98.7 mV	41.79 ft	360.00 ml/min
5/30/2024 4:09 PM	09:00	7.52 pH	18.84 °C	412.31 µS/cm	0.12 mg/L	0.54 NTU	-103.0 mV	41.79 ft	360.00 ml/min
5/30/2024 4:12 PM	12:00	7.56 pH	18.55 °C	412.58 µS/cm	0.09 mg/L	0.57 NTU	-106.3 mV	41.79 ft	360.00 ml/min
5/30/2024 4:15 PM	15:00	7.58 pH	18.64 °C	410.28 µS/cm	0.08 mg/L	0.51 NTU	-108.8 mV	41.79 ft	360.00 ml/min
5/30/2024 4:18 PM	18:00	7.61 pH	18.50 °C	412.36 µS/cm	0.06 mg/L	0.55 NTU	-111.1 mV	41.79 ft	360.00 ml/min
5/30/2024 4:21 PM	21:00	7.61 pH	18.03 °C	411.87 µS/cm	0.05 mg/L	0.57 NTU	-111.5 mV	41.79 ft	360.00 ml/min
5/30/2024 4:24 PM	24:00	7.60 pH	17.92 °C	412.84 µS/cm	0.05 mg/L	0.54 NTU	-111.2 mV	41.79 ft	360.00 ml/min
5/30/2024 4:27 PM	27:00	7.60 pH	17.76 °C	412.16 µS/cm	0.04 mg/L	0.66 NTU	-111.4 mV	41.79 ft	360.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/31/2024 10:45:07 AM
Project: Culley - West WAP-9D 5-31-24
Operator Name: Mykah Bertram

Location Name: WAP-9D **Latitude: 37.91301161** **Longitude: -87.33185889** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 116.1 ft** **Total Depth: 126.1 ft** **Initial Depth to Water: 48.25 ft**	**Pump Type: QED Bladder** **Pump Intake From TOC: 121.1 ft** **Estimated Total Volume Pumped: 2400 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 100 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651965**

Test Notes:

0.6 gallons purged.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
5/31/2024 10:45 AM	00:00	6.35 pH	20.74 °C	381.42 µS/cm	0.28 mg/L	0.39 NTU	-167.0 mV	48.25 ft	100.00 ml/min
5/31/2024 10:48 AM	03:00	6.36 pH	20.77 °C	382.30 µS/cm	0.24 mg/L	0.36 NTU	-170.1 mV	48.25 ft	100.00 ml/min
5/31/2024 10:51 AM	06:00	6.37 pH	20.85 °C	381.84 µS/cm	0.21 mg/L	0.38 NTU	-171.7 mV	48.25 ft	100.00 ml/min
5/31/2024 10:54 AM	09:00	6.37 pH	20.70 °C	381.48 µS/cm	0.20 mg/L	0.38 NTU	-173.2 mV	48.25 ft	100.00 ml/min
5/31/2024 10:57 AM	12:00	6.36 pH	21.05 °C	381.48 µS/cm	0.19 mg/L	0.49 NTU	-173.2 mV	48.25 ft	100.00 ml/min
5/31/2024 11:00 AM	15:00	6.37 pH	20.93 °C	381.76 µS/cm	0.18 mg/L	0.50 NTU	-174.5 mV	48.25 ft	100.00 ml/min
5/31/2024 11:03 AM	18:00	6.37 pH	20.99 °C	381.37 µS/cm	0.17 mg/L	0.50 NTU	-175.4 mV	48.25 ft	100.00 ml/min
5/31/2024 11:06 AM	21:00	6.37 pH	21.01 °C	380.24 µS/cm	0.16 mg/L	0.47 NTU	-176.1 mV	48.25 ft	100.00 ml/min
5/31/2024 11:09 AM	24:00	6.38 pH	21.32 °C	381.96 µS/cm	0.16 mg/L	0.47 NTU	-176.5 mV	48.25 ft	100.00 ml/min

Samples

Sample ID:	Description:

CENTERPOINT ENERGY - FB CULLEY STATION
WEST ASH POND
CCR Groundwater Sampling Event
Gauging Date:
November 11 , 2024
Atlas Project No. 170LF01646

WELL ID	DATE	TIME	TOP OF CASING ELEVATION (FT-MSL)	DTW FROM TOC	STATIC WATER ELEVATION (FT-MSL)
West Ash Pond Wells					
CCR-AP-7	11/11/2024	13:37	434.11	15.73	418.38
WAP-1	11/11/2024	12:37	403.39	13.95	389.44
WAP-2RR	11/11/2024	11:51	391.74	37.30	354.44
WAP-3S	11/11/2024	11:32	388.47	33.75	354.72
WAP-3D	11/11/2024	11:30	388.41	33.79	354.62
WAP-4S	11/11/2024	10:41	384.61	29.68	354.93
WAP-4I	11/11/2024	10:39	384.58	29.77	354.81
WAP-4D	11/11/2024	10:37	384.48	31.76	352.72
WAP-5S	11/11/2024	10:04	384.68	28.28	356.40
WAP-5I	11/11/2024	10:02	384.71	28.07	356.64
WAP-5D	11/11/2024	9:59	384.71	28.42	356.29
WAP-6S	11/11/2024	10:59	385.95	31.71	354.24
WAP-6I	11/11/2024	10:57	386.11	32.23	353.88
WAP-6D	11/11/2024	11:02	386.06	35.48	350.58
WAP-7S	11/11/2024	11:43	389.55	35.23	354.32
WAP-7D	11/11/2024	11:45	389.25	34.95	354.30
WAP-8S	11/11/2024	10:18	384.90	29.57	355.33
WAP-8I	11/11/2024	10:20	384.78	29.70	355.08
WAP-8D	11/11/2024	10:22	384.72	31.72	353.00
WAP-9S	11/11/2024	11:08	392.69	38.50	354.19
WAP-9I	11/11/2024	11:10	392.88	39.82	353.06
WAP-9D	11/11/2024	11:12	392.74	42.79	349.95
Temporary Piezometers					
PZ-1	Destroyed				
PZ-2	Destroyed				
PZ-3	11/11/2024	12:58	394.20	15.62	378.58
PZ-4	Couldn't Locate		401.60	-	-
PZ-5	Couldn't Locate		388.00	-	-
PZ-6	11/11/2024	12:55	403.90	14.02	389.88
PZ-7	11/11/2024	12:31	400.80	13.54	387.26
PZ-8	Destroyed				
PZ-9	Destroyed				
PZ-10	Destroyed				

NOTES
DTW= Depth to Water
TOC= Top of Casing

Low-Flow Test Report:

Test Date / Time: 11/15/2024 6:37:25 AM
Project: Culley West (19)
Operator Name: Jon Hil

Location Name: CCR-AP-7 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 20.0 ft** **Total Depth: 30.0 ft** **Initial Depth to Water: 14.02 ft**	**Pump Type: Peristaltic portable** **Tubing Type: LDPE** **Pump Intake From TOC: 25.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 4.48 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.6 L purged. MS/MSD-2

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/15/2024 6:37 AM	00:00	7.35 pH	15.43 °C	1,024.1 µS/cm	1.16 mg/L	23.26 NTU	-88.6 mV	14.02 ft	200.00 ml/min
11/15/2024 6:40 AM	03:00	7.22 pH	15.73 °C	1,029.5 µS/cm	0.40 mg/L	37.69 NTU	-100.2 mV	14.71 ft	200.00 ml/min
11/15/2024 6:43 AM	06:00	7.19 pH	15.81 °C	1,016.2 µS/cm	0.30 mg/L	16.76 NTU	-100.6 mV	15.33 ft	200.00 ml/min
11/15/2024 6:46 AM	09:00	7.18 pH	15.84 °C	1,015.4 µS/cm	0.27 mg/L	10.68 NTU	-100.2 mV	16.20 ft	200.00 ml/min
11/15/2024 6:49 AM	12:00	7.16 pH	15.85 °C	1,024.4 µS/cm	0.23 mg/L	5.93 NTU	-100.5 mV	16.84 ft	200.00 ml/min
11/15/2024 6:52 AM	15:00	7.16 pH	15.89 °C	1,016.0 µS/cm	0.22 mg/L	4.07 NTU	-101.7 mV	17.62 ft	200.00 ml/min
11/15/2024 6:55 AM	18:00	7.16 pH	15.91 °C	1,012.5 µS/cm	0.22 mg/L	5.57 NTU	-101.6 mV	18.50 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/13/2024 11:22:21 AM
Project: CULLEY WEST POND NOV 2024 GWM (2)
Operator Name: M. BRETING

Location Name: WAP-1 **Latitude:** **Longitude:** **Well Diameter: 2 in** **Casing Type: PVC**	**Pump Type: Hydrasleeve** **Tubing Type: HDPE** **Flow Cell Volume: 130 ml**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625772**

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3
11/13/2024 11:22 AM	00:00	7.33 pH	17.16 °C	0.44 µS/cm	10.04 mg/L	20.61 NTU	-48.6 mV	
11/13/2024 11:25 AM	03:00	7.34 pH	17.13 °C	0.62 µS/cm	9.84 mg/L	22.14 NTU	-19.7 mV	
11/13/2024 11:28 AM	06:00	7.35 pH	17.09 °C	0.66 µS/cm	9.72 mg/L	22.78 NTU	-2.8 mV	

Samples

Sample ID:	Description:
WAP-1	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/13/2024 1:00:54 PM
Project: Culley West (13)
Operator Name: Jon Hil

Location Name: WAP-2RR **Latitude: 37.91437026** **Longitude: -87.33075976** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 46.0 ft** **Total Depth: 56.0 ft** **Initial Depth to Water: 37.61 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 51 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.6 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/13/2024 1:00 PM	00:00	6.71 pH	16.84 °C	763.82 µS/cm	0.22 mg/L	1.21 NTU	74.4 mV	37.61 ft	200.00 ml/min
11/13/2024 1:03 PM	03:00	6.73 pH	16.89 °C	764.36 µS/cm	0.14 mg/L	0.00 NTU	70.5 mV	37.61 ft	200.00 ml/min
11/13/2024 1:06 PM	06:00	6.68 pH	16.87 °C	763.18 µS/cm	0.11 mg/L	0.00 NTU	71.7 mV	37.61 ft	200.00 ml/min
11/13/2024 1:09 PM	09:00	6.71 pH	16.89 °C	763.91 µS/cm	0.10 mg/L	0.00 NTU	70.1 mV	37.61 ft	200.00 ml/min
11/13/2024 1:12 PM	12:00	6.68 pH	16.86 °C	764.28 µS/cm	0.09 mg/L	0.00 NTU	71.4 mV	37.61 ft	200.00 ml/min
11/13/2024 1:15 PM	15:00	6.70 pH	16.89 °C	764.14 µS/cm	0.08 mg/L	0.00 NTU	71.1 mV	37.61 ft	200.00 ml/min
11/13/2024 1:18 PM	18:00	6.68 pH	16.89 °C	764.60 µS/cm	0.07 mg/L	0.00 NTU	72.4 mV	37.61 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/13/2024 10:20:08 AM
Project: Culley West (10)
Operator Name: Jon Hil

Location Name: WAP-3S **Latitude: 37.91378611** **Longitude: -87.33112744** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 60.0 ft** **Total Depth: 70.0 ft** **Initial Depth to Water: 35.18 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 65 ft** **Estimated Total Volume Pumped: 6000 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.02 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
6 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/13/2024 10:20 AM	00:00	7.65 pH	17.03 °C	658.28 µS/cm	0.77 mg/L	17.72 NTU	84.1 mV	35.18 ft	200.00 ml/min
11/13/2024 10:23 AM	03:00	7.74 pH	17.06 °C	634.63 µS/cm	0.22 mg/L	36.82 NTU	68.6 mV	35.20 ft	200.00 ml/min
11/13/2024 10:26 AM	06:00	7.75 pH	17.10 °C	637.02 µS/cm	0.15 mg/L	44.02 NTU	49.9 mV	35.18 ft	200.00 ml/min
11/13/2024 10:29 AM	09:00	7.77 pH	17.11 °C	633.59 µS/cm	0.13 mg/L	30.61 NTU	31.3 mV	35.19 ft	200.00 ml/min
11/13/2024 10:32 AM	12:00	7.79 pH	17.11 °C	630.81 µS/cm	0.12 mg/L	20.77 NTU	16.1 mV	35.20 ft	200.00 ml/min
11/13/2024 10:35 AM	15:00	7.79 pH	17.11 °C	630.61 µS/cm	0.11 mg/L	19.52 NTU	4.1 mV	35.20 ft	200.00 ml/min
11/13/2024 10:38 AM	18:00	7.74 pH	17.12 °C	630.38 µS/cm	0.11 mg/L	19.46 NTU	-1.8 mV	35.20 ft	200.00 ml/min
11/13/2024 10:41 AM	21:00	7.75 pH	17.14 °C	629.08 µS/cm	0.10 mg/L	15.34 NTU	-9.1 mV	35.20 ft	200.00 ml/min
11/13/2024 10:44 AM	24:00	7.77 pH	17.12 °C	631.25 µS/cm	0.11 mg/L	16.38 NTU	-15.1 mV	35.20 ft	200.00 ml/min
11/13/2024 10:47 AM	27:00	7.78 pH	17.13 °C	630.09 µS/cm	0.10 mg/L	9.36 NTU	-19.5 mV	35.20 ft	200.00 ml/min
11/13/2024 10:50 AM	30:00	7.79 pH	17.14 °C	630.46 µS/cm	0.10 mg/L	8.77 NTU	-23.0 mV	35.20 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/13/2024 9:31:07 AM
Project: Culley West (9)
Operator Name: Jon Hil

Location Name: WAP-3D **Latitude: 37.91379475** **Longitude: -87.33110378** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 72.5 ft** **Total Depth: 82.5 ft** **Initial Depth to Water: 35.1 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 77.5 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.6 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/13/2024 9:31 AM	00:00	7.65 pH	13.58 °C	0.07 µS/cm	10.72 mg/L	0.00 NTU	59.0 mV	35.10 ft	200.00 ml/min
11/13/2024 9:34 AM	03:00	7.36 pH	16.73 °C	865.44 µS/cm	1.13 mg/L	48.17 NTU	39.2 mV	35.10 ft	200.00 ml/min
11/13/2024 9:37 AM	06:00	7.51 pH	16.90 °C	843.98 µS/cm	0.20 mg/L	15.94 NTU	25.3 mV	35.10 ft	200.00 ml/min
11/13/2024 9:40 AM	09:00	7.52 pH	16.94 °C	827.47 µS/cm	0.13 mg/L	6.84 NTU	18.2 mV	35.10 ft	200.00 ml/min
11/13/2024 9:43 AM	12:00	7.54 pH	16.95 °C	827.42 µS/cm	0.10 mg/L	6.17 NTU	12.7 mV	35.10 ft	200.00 ml/min
11/13/2024 9:46 AM	15:00	7.53 pH	17.02 °C	825.68 µS/cm	0.09 mg/L	1.02 NTU	10.6 mV	35.10 ft	200.00 ml/min
11/13/2024 9:49 AM	18:00	7.48 pH	17.02 °C	825.75 µS/cm	0.09 mg/L	0.70 NTU	11.5 mV	35.10 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/12/2024 4:03:22 PM
Project: Culley West (6)
Operator Name: Jon Hil

Location Name: WAP-4S **Latitude: 37.91229184** **Longitude: -87.33089535** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 35.0 ft** **Total Depth: 45.0 ft** **Initial Depth to Water: 30.25 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 40.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.19 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.6 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/12/2024 4:03 PM	00:00	7.23 pH	16.16 °C	1,310.5 µS/cm	0.14 mg/L	9.71 NTU	-20.8 mV	30.25 ft	200.00 ml/min
11/12/2024 4:06 PM	03:00	7.25 pH	16.20 °C	1,316.2 µS/cm	0.11 mg/L	3.84 NTU	-31.9 mV	30.30 ft	200.00 ml/min
11/12/2024 4:09 PM	06:00	7.25 pH	16.16 °C	1,319.6 µS/cm	0.09 mg/L	0.14 NTU	-36.7 mV	30.33 ft	200.00 ml/min
11/12/2024 4:12 PM	09:00	7.25 pH	16.18 °C	1,321.2 µS/cm	0.08 mg/L	0.09 NTU	-39.7 mV	30.37 ft	200.00 ml/min
11/12/2024 4:15 PM	12:00	7.25 pH	16.17 °C	1,322.2 µS/cm	0.07 mg/L	0.00 NTU	-42.0 mV	30.39 ft	200.00 ml/min
11/12/2024 4:18 PM	15:00	7.26 pH	16.17 °C	1,321.8 µS/cm	0.07 mg/L	0.00 NTU	-43.8 mV	30.41 ft	200.00 ml/min
11/12/2024 4:21 PM	18:00	7.26 pH	16.14 °C	1,322.2 µS/cm	0.06 mg/L	0.00 NTU	-45.1 mV	30.44 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/12/2024 3:24:52 PM
Project: Culley West (5)
Operator Name: Jon Hil

Location Name: WAP-4I **Latitude: 37.91227905** **Longitude: -87.33083844** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 65.0 ft** **Total Depth: 75.0 ft** **Initial Depth to Water: 30.46 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 70.0 ft** **Estimated Total Volume Pumped: 3903.333 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.07 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.6 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/12/2024 3:24 PM	00:00	7.33 pH	18.57 °C	389.59 µS/cm	0.57 mg/L	0.12 NTU	7.6 mV	30.46 ft	200.00 ml/min
11/12/2024 3:29 PM	04:31	7.33 pH	19.00 °C	406.84 µS/cm	0.21 mg/L	0.00 NTU	-12.2 mV	30.48 ft	200.00 ml/min
11/12/2024 3:32 PM	07:31	7.37 pH	19.10 °C	407.25 µS/cm	0.18 mg/L	0.00 NTU	-19.8 mV	30.50 ft	200.00 ml/min
11/12/2024 3:35 PM	10:31	7.37 pH	19.19 °C	407.48 µS/cm	0.16 mg/L	0.00 NTU	-22.4 mV	30.51 ft	200.00 ml/min
11/12/2024 3:38 PM	13:31	7.36 pH	19.23 °C	407.60 µS/cm	0.15 mg/L	0.00 NTU	-23.5 mV	30.51 ft	200.00 ml/min
11/12/2024 3:41 PM	16:31	7.37 pH	19.28 °C	407.60 µS/cm	0.15 mg/L	0.00 NTU	-24.4 mV	30.52 ft	200.00 ml/min
11/12/2024 3:44 PM	19:31	7.36 pH	19.33 °C	407.35 µS/cm	0.14 mg/L	0.00 NTU	-24.4 mV	30.53 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 11/12/2024 2:41:49 PM
Project: Culley West (4)
Operator Name: Jon Hil

Location Name: WAP-4D **Latitude: 37.91221202** **Longitude: -87.33092646** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 106.0 ft** **Total Depth: 116.0 ft** **Initial Depth to Water: 32.35 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 111.0 ft** **Estimated Total Volume Pumped: 5400 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.12 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
5.4 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/12/2024 2:41 PM	00:00	7.36 pH	20.13 °C	1.11 µS/cm	9.34 mg/L	0.00 NTU	132.1 mV	32.35 ft	200.00 ml/min
11/12/2024 2:44 PM	03:00	7.80 pH	17.96 °C	345.41 µS/cm	1.39 mg/L	0.00 NTU	112.3 mV	32.38 ft	200.00 ml/min
11/12/2024 2:47 PM	06:00	7.65 pH	18.26 °C	352.24 µS/cm	0.32 mg/L	0.00 NTU	-66.1 mV	32.41 ft	200.00 ml/min
11/12/2024 2:50 PM	09:00	7.65 pH	18.21 °C	353.61 µS/cm	0.20 mg/L	0.00 NTU	-94.5 mV	32.44 ft	200.00 ml/min
11/12/2024 2:53 PM	12:00	7.66 pH	18.22 °C	353.72 µS/cm	0.16 mg/L	0.00 NTU	-105.5 mV	32.46 ft	200.00 ml/min
11/12/2024 2:56 PM	15:00	7.67 pH	18.25 °C	353.93 µS/cm	0.14 mg/L	0.00 NTU	-112.3 mV	32.46 ft	200.00 ml/min
11/12/2024 2:59 PM	18:00	7.68 pH	18.26 °C	354.07 µS/cm	0.13 mg/L	0.00 NTU	-116.9 mV	32.47 ft	200.00 ml/min
11/12/2024 3:02 PM	21:00	7.68 pH	18.23 °C	354.07 µS/cm	0.12 mg/L	0.00 NTU	-120.7 mV	32.47 ft	200.00 ml/min
11/12/2024 3:05 PM	24:00	7.68 pH	18.24 °C	354.08 µS/cm	0.11 mg/L	0.00 NTU	-123.3 mV	32.47 ft	200.00 ml/min
11/12/2024 3:08 PM	27:00	7.69 pH	18.25 °C	354.25 µS/cm	0.11 mg/L	0.00 NTU	-125.5 mV	32.47 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/12/2024 1:18:33 PM
Project: Culley West (3)
Operator Name: Jon Hil

Location Name: WAP-5S **Latitude: 37.91173936** **Longitude: -87.33018375** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.0 ft** **Total Depth: 40.0 ft** **Initial Depth to Water: 28.95 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 35.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.17 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.8 L purged. DUP-1, FB-1 collected at this location.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/12/2024 1:18 PM	00:00	6.55 pH	17.41 °C	1,389.5 µS/cm	0.20 mg/L	36.61 NTU	47.3 mV	28.95 ft	200.00 ml/min
11/12/2024 1:21 PM	03:00	6.50 pH	17.20 °C	1,397.2 µS/cm	0.16 mg/L	2.80 NTU	36.5 mV	28.99 ft	200.00 ml/min
11/12/2024 1:24 PM	06:00	6.50 pH	17.21 °C	1,396.1 µS/cm	0.12 mg/L	0.44 NTU	30.0 mV	29.03 ft	200.00 ml/min
11/12/2024 1:27 PM	09:00	6.51 pH	17.13 °C	1,397.5 µS/cm	0.11 mg/L	0.22 NTU	26.4 mV	29.07 ft	200.00 ml/min
11/12/2024 1:30 PM	12:00	6.52 pH	17.07 °C	1,396.8 µS/cm	0.10 mg/L	0.00 NTU	24.2 mV	29.10 ft	200.00 ml/min
11/12/2024 1:33 PM	15:00	6.53 pH	17.13 °C	1,396.1 µS/cm	0.11 mg/L	0.00 NTU	23.0 mV	29.11 ft	200.00 ml/min
11/12/2024 1:36 PM	18:00	6.55 pH	17.04 °C	1,395.2 µS/cm	0.12 mg/L	0.00 NTU	21.8 mV	29.12 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/12/2024 11:52:28 AM
Project: Culley West (2)
Operator Name: Jon Hil

Location Name: WAP-5I **Latitude: 37.91172191** **Longitude: -87.33016591** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 65.0 ft** **Total Depth: 75.0 ft** **Initial Depth to Water: 29.05 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 70.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.07 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.8 L purged. MS/MSD-1 collected.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/12/2024 11:52 AM	00:00	7.00 pH	19.25 °C	395.30 µS/cm	0.21 mg/L	233.05 NTU	34.4 mV	29.05 ft	200.00 ml/min
11/12/2024 11:55 AM	03:00	7.06 pH	19.34 °C	324.00 µS/cm	0.69 mg/L	144.74 NTU	25.7 mV	29.07 ft	200.00 ml/min
11/12/2024 11:58 AM	06:00	7.04 pH	19.29 °C	326.56 µS/cm	0.11 mg/L	120.96 NTU	10.3 mV	29.10 ft	200.00 ml/min
11/12/2024 12:01 PM	09:00	7.06 pH	19.41 °C	326.02 µS/cm	0.10 mg/L	67.76 NTU	3.6 mV	29.11 ft	200.00 ml/min
11/12/2024 12:04 PM	12:00	7.08 pH	19.40 °C	327.54 µS/cm	0.10 mg/L	18.79 NTU	-1.2 mV	29.12 ft	200.00 ml/min
11/12/2024 12:07 PM	15:00	7.11 pH	19.48 °C	328.32 µS/cm	0.10 mg/L	11.03 NTU	-5.1 mV	29.12 ft	200.00 ml/min
11/12/2024 12:10 PM	18:00	7.15 pH	19.45 °C	328.96 µS/cm	0.10 mg/L	4.98 NTU	-8.8 mV	29.12 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/12/2024 11:03:00 AM
Project: Culley West
Operator Name: Jon Hil

Location Name: WAP-5D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 103.0 ft** **Total Depth: 113.0 ft** **Initial Depth to Water: 29.5 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 108.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.11 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.6 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/12/2024 11:03 AM	00:00	7.55 pH	16.56 °C	358.52 µS/cm	6.72 mg/L	4.09 NTU	212.0 mV	29.50 ft	200.00 ml/min
11/12/2024 11:06 AM	03:00	7.37 pH	17.93 °C	357.48 µS/cm	0.46 mg/L	2.21 NTU	-20.9 mV	29.53 ft	200.00 ml/min
11/12/2024 11:09 AM	06:00	7.34 pH	18.14 °C	358.14 µS/cm	0.28 mg/L	0.00 NTU	-57.4 mV	29.56 ft	200.00 ml/min
11/12/2024 11:12 AM	09:00	7.37 pH	18.20 °C	358.35 µS/cm	0.21 mg/L	0.00 NTU	-70.6 mV	29.57 ft	200.00 ml/min
11/12/2024 11:15 AM	12:00	7.35 pH	18.19 °C	358.15 µS/cm	0.15 mg/L	0.00 NTU	-75.7 mV	29.59 ft	200.00 ml/min
11/12/2024 11:18 AM	15:00	7.34 pH	18.24 °C	358.52 µS/cm	0.15 mg/L	0.00 NTU	-79.5 mV	29.60 ft	200.00 ml/min
11/12/2024 11:21 AM	18:00	7.38 pH	18.31 °C	358.49 µS/cm	0.13 mg/L	0.00 NTU	-84.0 mV	29.61 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 11/14/2024 9:09:18 AM
Project: Culley West (14)
Operator Name: Jon Hil

Location Name: WAP-6S **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 40.0 ft** **Total Depth: 50.0 ft** **Initial Depth to Water: 32.68 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 45.0 ft** **Estimated Total Volume Pumped: 12490 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
12.5 L purged. Recalibrated conductivity after 24 minute reading.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/14/2024 9:09 AM	00:00	7.52 pH	16.41 °C	355.80 µS/cm	6.53 mg/L	176.51 NTU	155.6 mV	32.68 ft	200.00 ml/min
11/14/2024 9:12 AM	03:00	7.42 pH	16.25 °C	374.60 µS/cm	6.53 mg/L	72.64 NTU	160.6 mV	32.68 ft	200.00 ml/min
11/14/2024 9:15 AM	06:00	7.31 pH	16.10 °C	376.04 µS/cm	6.62 mg/L	40.38 NTU	167.7 mV	32.68 ft	200.00 ml/min
11/14/2024 9:18 AM	09:00	7.34 pH	16.01 °C	380.15 µS/cm	6.26 mg/L	22.15 NTU	168.5 mV	32.68 ft	200.00 ml/min
11/14/2024 9:21 AM	12:00	7.32 pH	15.91 °C	397.23 µS/cm	5.42 mg/L	20.76 NTU	172.4 mV	32.68 ft	200.00 ml/min
11/14/2024 9:24 AM	15:00	7.29 pH	15.87 °C	351.87 µS/cm	4.14 mg/L	15.48 NTU	175.7 mV	32.68 ft	200.00 ml/min
11/14/2024 9:27 AM	18:00	7.36 pH	15.82 °C	247.76 µS/cm	2.81 mg/L	11.42 NTU	175.0 mV	32.68 ft	200.00 ml/min
11/14/2024 9:30 AM	21:00	7.31 pH	15.80 °C	19.37 µS/cm	1.95 mg/L	8.59 NTU	178.4 mV	32.68 ft	200.00 ml/min
11/14/2024 9:33 AM	24:00	7.38 pH	15.79 °C	0.47 µS/cm	1.40 mg/L	2.92 NTU	173.4 mV	32.68 ft	200.00 ml/min
11/14/2024 9:35 AM	26:27	7.25 pH	14.44 °C	7,990.3 µS/cm	9.74 mg/L	4.78 NTU	338.5 mV	32.68 ft	200.00 ml/min
11/14/2024 9:38 AM	29:27	7.45 pH	15.76 °C	575.63 µS/cm	0.95 mg/L	0.49 NTU	284.5 mV	32.68 ft	200.00 ml/min
11/14/2024 9:41 AM	32:27	7.32 pH	15.76 °C	576.07 µS/cm	0.82 mg/L	10.89 NTU	278.8 mV	32.68 ft	200.00 ml/min
11/14/2024 9:44 AM	35:27	7.39 pH	15.76 °C	576.30 µS/cm	0.68 mg/L	0.00 NTU	267.6 mV	32.68 ft	200.00 ml/min
11/14/2024 9:47 AM	38:27	7.37 pH	15.74 °C	576.21 µS/cm	0.68 mg/L	0.00 NTU	260.4 mV	32.68 ft	200.00 ml/min
11/14/2024 9:50 AM	41:27	7.40 pH	15.74 °C	576.11 µS/cm	0.63 mg/L	0.00 NTU	250.9 mV	32.68 ft	200.00 ml/min

11/14/2024 9:53 AM	44:27	7.38 pH	15.72 °C	575.74 µS/cm	0.67 mg/L	0.00 NTU	243.2 mV	32.68 ft	200.00 ml/min
11/14/2024 9:56 AM	47:27	7.32 pH	15.74 °C	578.42 µS/cm	0.58 mg/L	0.00 NTU	238.1 mV	32.68 ft	200.00 ml/min
11/14/2024 9:59 AM	50:27	7.39 pH	15.73 °C	574.24 µS/cm	0.55 mg/L	0.00 NTU	226.4 mV	32.68 ft	200.00 ml/min
11/14/2024 10:02 AM	53:27	7.34 pH	15.73 °C	570.65 µS/cm	0.48 mg/L	0.00 NTU	220.9 mV	32.68 ft	200.00 ml/min
11/14/2024 10:05 AM	56:27	7.40 pH	15.74 °C	573.81 µS/cm	0.60 mg/L	0.00 NTU	209.3 mV	32.68 ft	200.00 ml/min
11/14/2024 10:08 AM	59:27	7.36 pH	15.75 °C	573.62 µS/cm	0.47 mg/L	4.10 NTU	202.5 mV	32.68 ft	200.00 ml/min
11/14/2024 10:11 AM	01:02:27	7.40 pH	15.79 °C	575.75 µS/cm	0.48 mg/L	0.00 NTU	192.6 mV	32.68 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/13/2024 7:01:31 AM
Project: Culley West (7)
Operator Name: Jon Hil

Location Name: WAP-6I **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 40.0 ft** **Total Depth: 50.0 ft** **Initial Depth to Water: 33.58 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 45.0 ft** **Estimated Total Volume Pumped: 4800 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.02 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
4.8 L purged. DUP-2 collected.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/13/2024 7:01 AM	00:00	7.94 pH	15.69 °C	361.26 µS/cm	2.17 mg/L	0.00 NTU	154.7 mV	33.58 ft	200.00 ml/min
11/13/2024 7:04 AM	03:00	7.70 pH	16.14 °C	394.11 µS/cm	0.54 mg/L	0.00 NTU	97.7 mV	33.58 ft	200.00 ml/min
11/13/2024 7:07 AM	06:00	7.63 pH	16.27 °C	398.39 µS/cm	0.27 mg/L	0.00 NTU	19.2 mV	33.58 ft	200.00 ml/min
11/13/2024 7:10 AM	09:00	7.60 pH	16.28 °C	399.07 µS/cm	0.22 mg/L	0.00 NTU	-18.3 mV	33.59 ft	200.00 ml/min
11/13/2024 7:13 AM	12:00	7.59 pH	16.30 °C	399.05 µS/cm	0.17 mg/L	0.00 NTU	-31.7 mV	33.60 ft	200.00 ml/min
11/13/2024 7:16 AM	15:00	7.49 pH	16.54 °C	398.99 µS/cm	0.13 mg/L	0.00 NTU	-34.4 mV	33.60 ft	200.00 ml/min
11/13/2024 7:19 AM	18:00	7.50 pH	16.58 °C	398.33 µS/cm	0.10 mg/L	0.00 NTU	-40.8 mV	33.60 ft	200.00 ml/min
11/13/2024 7:22 AM	21:00	7.53 pH	16.65 °C	399.38 µS/cm	0.10 mg/L	0.00 NTU	-45.5 mV	33.60 ft	200.00 ml/min
11/13/2024 7:25 AM	24:00	7.53 pH	16.69 °C	398.80 µS/cm	0.09 mg/L	0.00 NTU	-48.6 mV	33.60 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 11/13/2024 8:38:03 AM
Project: Culley West (8)
Operator Name: Jon Hil

Location Name: WAP-6D **Latitude: 37.91290959** **Longitude: -87.33178178** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 105.5 ft** **Total Depth: 115.5 ft** **Initial Depth to Water: 37.69 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 110.5 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.07 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.6 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/13/2024 8:38 AM	00:00	7.51 pH	15.50 °C	336.75 µS/cm	0.90 mg/L	0.00 NTU	-58.6 mV	37.69 ft	200.00 ml/min
11/13/2024 8:41 AM	03:00	7.58 pH	15.93 °C	335.54 µS/cm	0.28 mg/L	0.00 NTU	-75.8 mV	37.70 ft	200.00 ml/min
11/13/2024 8:44 AM	06:00	7.57 pH	16.01 °C	335.73 µS/cm	0.21 mg/L	0.00 NTU	-85.3 mV	37.72 ft	200.00 ml/min
11/13/2024 8:47 AM	09:00	7.57 pH	15.99 °C	335.68 µS/cm	0.19 mg/L	0.00 NTU	-91.3 mV	37.75 ft	200.00 ml/min
11/13/2024 8:50 AM	12:00	7.59 pH	16.01 °C	335.66 µS/cm	0.17 mg/L	0.00 NTU	-96.4 mV	37.75 ft	200.00 ml/min
11/13/2024 8:53 AM	15:00	7.54 pH	16.01 °C	335.70 µS/cm	0.16 mg/L	0.00 NTU	-96.7 mV	37.75 ft	200.00 ml/min
11/13/2024 8:56 AM	18:00	7.60 pH	16.05 °C	335.71 µS/cm	0.16 mg/L	0.00 NTU	-102.3 mV	37.76 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/13/2024 11:20:09 AM
Project: Culley West (11)
Operator Name: Jon Hil

Location Name: WAP-7S **Latitude: 37.91432318** **Longitude: -87.33077057** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 50.0 ft** **Total Depth: 60.0 ft** **Initial Depth to Water: 35.71 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 55.0 ft** **Estimated Total Volume Pumped: 4200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
4.2 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/13/2024 11:20 AM	00:00	10.12 pH	17.24 °C	946.90 µS/cm	0.88 mg/L	19.66 NTU	43.6 mV	35.71 ft	200.00 ml/min
11/13/2024 11:23 AM	03:00	10.65 pH	17.31 °C	960.72 µS/cm	0.22 mg/L	2.63 NTU	5.2 mV	35.71 ft	200.00 ml/min
11/13/2024 11:26 AM	06:00	10.72 pH	17.30 °C	957.51 µS/cm	0.16 mg/L	0.90 NTU	-14.2 mV	35.71 ft	200.00 ml/min
11/13/2024 11:29 AM	09:00	10.78 pH	17.32 °C	955.38 µS/cm	0.13 mg/L	0.00 NTU	-29.2 mV	35.71 ft	200.00 ml/min
11/13/2024 11:32 AM	12:00	10.77 pH	17.32 °C	953.58 µS/cm	0.12 mg/L	0.00 NTU	-37.7 mV	35.71 ft	200.00 ml/min
11/13/2024 11:35 AM	15:00	10.80 pH	17.32 °C	952.27 µS/cm	0.11 mg/L	0.00 NTU	-45.5 mV	35.71 ft	200.00 ml/min
11/13/2024 11:38 AM	18:00	10.79 pH	17.29 °C	950.29 µS/cm	0.10 mg/L	0.00 NTU	-50.2 mV	35.71 ft	200.00 ml/min
11/13/2024 11:41 AM	21:00	10.79 pH	17.31 °C	949.99 µS/cm	0.09 mg/L	0.00 NTU	-54.4 mV	35.71 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 11/13/2024 12:08:14 PM
Project: Culley West (12)
Operator Name: Jon Hil

Location Name: WAP-7D **Latitude: 37.91429128** **Longitude: -87.33075183** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 68.6 ft** **Total Depth: 78.6 ft** **Initial Depth to Water: 35.49 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 73.6 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.04 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.6 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/13/2024 12:08 PM	00:00	7.47 pH	17.05 °C	1,911.2 µS/cm	0.36 mg/L	11.62 NTU	-39.5 mV	35.49 ft	200.00 ml/min
11/13/2024 12:11 PM	03:00	7.36 pH	17.05 °C	1,914.3 µS/cm	0.20 mg/L	2.86 NTU	-50.8 mV	35.50 ft	200.00 ml/min
11/13/2024 12:14 PM	06:00	7.28 pH	17.03 °C	1,913.4 µS/cm	0.17 mg/L	0.63 NTU	-47.9 mV	35.52 ft	200.00 ml/min
11/13/2024 12:17 PM	09:00	7.25 pH	17.06 °C	1,917.1 µS/cm	0.15 mg/L	0.00 NTU	-46.0 mV	35.53 ft	200.00 ml/min
11/13/2024 12:20 PM	12:00	7.23 pH	17.07 °C	1,919.8 µS/cm	0.14 mg/L	0.00 NTU	-44.7 mV	35.53 ft	200.00 ml/min
11/13/2024 12:23 PM	15:00	7.21 pH	17.06 °C	1,917.7 µS/cm	0.13 mg/L	0.00 NTU	-43.6 mV	35.53 ft	200.00 ml/min
11/13/2024 12:26 PM	18:00	7.21 pH	17.09 °C	1,918.5 µS/cm	0.13 mg/L	0.00 NTU	-43.1 mV	35.53 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/12/2024 3:53:11 PM
Project: CULLEY WEST POND NOV 2024 GWM (4)
Operator Name: M. BRETING

Location Name: WAP-8S **Latitude: 37.91281412** **Longitude: -87.33101089** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 40.0 ft** **Total Depth: 50.0 ft** **Initial Depth to Water: 31.41 ft**	**Pump Type: Dedicated** **Tubing Type: HDPE** **Pump Intake From TOC: 45.0 ft** **Estimated Total Volume Pumped: 10200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: -0.26 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625772**

Test Notes:

Weather Conditions:
Clear 49 degrees

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.3	
11/12/2024 3:53 PM	00:00	7.29 pH	16.26 °C	936.05 µS/cm	2.68 mg/L	325.88 NTU	-106.8 mV	31.31 ft	200.00 ml/min
11/12/2024 3:56 PM	03:00	7.35 pH	16.29 °C	977.26 µS/cm	1.31 mg/L	1,642.1 NTU	-127.3 mV		200.00 ml/min
11/12/2024 3:59 PM	06:00	7.38 pH	16.10 °C	979.96 µS/cm	1.03 mg/L	119.32 NTU	-134.9 mV	31.27 ft	200.00 ml/min
11/12/2024 4:02 PM	09:00	7.38 pH	15.97 °C	978.34 µS/cm	0.85 mg/L	36.27 NTU	-137.1 mV		200.00 ml/min
11/12/2024 4:05 PM	12:00	7.40 pH	15.95 °C	983.07 µS/cm	0.67 mg/L	17.34 NTU	-140.7 mV	31.22 ft	200.00 ml/min
11/12/2024 4:08 PM	15:00	7.41 pH	15.93 °C	980.37 µS/cm	0.56 mg/L	7.12 NTU	-143.4 mV		200.00 ml/min
11/12/2024 4:11 PM	18:00	7.41 pH	15.88 °C	980.48 µS/cm	0.48 mg/L	8.11 NTU	-145.5 mV	31.20 ft	200.00 ml/min
11/12/2024 4:14 PM	21:00	7.42 pH	15.85 °C	980.50 µS/cm	0.41 mg/L	4.74 NTU	-147.0 mV		200.00 ml/min
11/12/2024 4:17 PM	24:00	7.42 pH	15.81 °C	979.13 µS/cm	0.37 mg/L	2.80 NTU	-148.0 mV	31.17 ft	200.00 ml/min
11/12/2024 4:20 PM	27:00	7.42 pH	15.70 °C	978.69 µS/cm	0.33 mg/L	2.13 NTU	-149.1 mV		200.00 ml/min
11/12/2024 4:23 PM	30:00	7.42 pH	15.54 °C	978.09 µS/cm	0.30 mg/L	2.07 NTU	-149.6 mV		200.00 ml/min
11/12/2024 4:26 PM	33:00	7.42 pH	15.47 °C	975.14 µS/cm	0.27 mg/L	1.09 NTU	-150.6 mV	31.15 ft	200.00 ml/min
11/12/2024 4:29 PM	36:00	7.43 pH	15.41 °C	977.07 µS/cm	0.25 mg/L	0.68 NTU	-152.1 mV		200.00 ml/min

11/12/2024 4:32 PM	39:00	7.42 pH	15.42 °C	973.79 µS/cm	0.23 mg/L	0.18 NTU	-152.5 mV	31.15 ft	200.00 ml/min
11/12/2024 4:35 PM	42:00	7.42 pH	15.43 °C	972.03 µS/cm	0.22 mg/L	0.33 NTU	-153.3 mV		200.00 ml/min
11/12/2024 4:38 PM	45:00	7.42 pH	15.39 °C	972.82 µS/cm	0.21 mg/L	0.00 NTU	-153.9 mV	31.15 ft	200.00 ml/min
11/12/2024 4:41 PM	48:00	7.42 pH	15.45 °C	970.03 µS/cm	0.20 mg/L	0.14 NTU	-154.9 mV		200.00 ml/min
11/12/2024 4:44 PM	51:00	7.43 pH	15.40 °C	970.41 µS/cm	0.19 mg/L	0.04 NTU	-155.8 mV		200.00 ml/min

Samples

Sample ID:	Description:
WAP-8S	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/12/2024 2:02:55 PM
Project: CULLEY WEST POND NOV 2024 GWM (3)
Operator Name: M. BRETING

Location Name: WAP-8I **Latitude: 37.91288338** **Longitude: -87.33099585** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 70.0 ft** **Total Depth: 80.0 ft** **Initial Depth to Water: 31.30 ft**	**Pump Type: Dedicated** **Tubing Type: HDPE** **Pump Intake From TOC: 75.0 ft** **Estimated Total Volume Pumped: 15600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.10 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625772**

Test Notes:

Weather Conditions:
Clear 50 degrees

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
11/12/2024 2:02 PM	00:00	7.41 pH	16.01 °C	359.09 µS/cm	3.39 mg/L	33.31 NTU	-61.6 mV	31.25 ft	200.00 ml/min
11/12/2024 2:05 PM	03:00	7.42 pH	16.30 °C	359.78 µS/cm	3.19 mg/L	26.21 NTU	-52.6 mV		200.00 ml/min
11/12/2024 2:08 PM	06:00	7.42 pH	16.15 °C	360.11 µS/cm	2.97 mg/L	11.07 NTU	-47.5 mV		200.00 ml/min
11/12/2024 2:11 PM	09:00	7.41 pH	16.19 °C	360.35 µS/cm	2.81 mg/L	17.56 NTU	-44.7 mV		200.00 ml/min
11/12/2024 2:14 PM	12:00	7.41 pH	16.27 °C	360.51 µS/cm	2.63 mg/L	5.44 NTU	-44.7 mV	31.27 ft	200.00 ml/min
11/12/2024 2:17 PM	15:00	7.41 pH	16.46 °C	360.36 µS/cm	2.48 mg/L	23.56 NTU	-39.9 mV		200.00 ml/min
11/12/2024 2:20 PM	18:00	7.41 pH	16.24 °C	360.47 µS/cm	2.33 mg/L	5.36 NTU	-38.0 mV		200.00 ml/min
11/12/2024 2:23 PM	21:00	7.41 pH	16.04 °C	360.14 µS/cm	2.19 mg/L	5.10 NTU	-41.6 mV	31.27 ft	200.00 ml/min
11/12/2024 2:26 PM	24:00	7.41 pH	16.02 °C	359.81 µS/cm	2.06 mg/L	21.46 NTU	-40.6 mV		200.00 ml/min
11/12/2024 2:29 PM	27:00	7.40 pH	16.18 °C	359.74 µS/cm	1.94 mg/L	28.64 NTU	-36.6 mV		200.00 ml/min
11/12/2024 2:32 PM	30:00	7.40 pH	16.13 °C	359.85 µS/cm	1.82 mg/L	17.63 NTU	-37.7 mV	31.27 ft	200.00 ml/min
11/12/2024 2:35 PM	33:00	7.40 pH	16.12 °C	359.61 µS/cm	1.72 mg/L	5.70 NTU	-39.3 mV		200.00 ml/min
11/12/2024 2:38 PM	36:00	7.40 pH	16.23 °C	359.73 µS/cm	1.62 mg/L	5.44 NTU	-41.3 mV		200.00 ml/min

11/12/2024 2:41 PM	39:00	7.40 pH	16.33 °C	359.66 µS/cm	1.53 mg/L	1.74 NTU	-43.8 mV	31.27 ft	200.00 ml/min
11/12/2024 2:44 PM	42:00	7.40 pH	16.29 °C	359.72 µS/cm	1.43 mg/L	0.40 NTU	-46.8 mV		200.00 ml/min
11/12/2024 2:47 PM	45:00	7.40 pH	16.24 °C	359.46 µS/cm	1.35 mg/L	1.96 NTU	-46.1 mV		200.00 ml/min
11/12/2024 2:50 PM	48:00	7.40 pH	16.11 °C	359.36 µS/cm	1.27 mg/L	0.21 NTU	-48.7 mV	31.27 ft	200.00 ml/min
11/12/2024 2:53 PM	51:00	7.40 pH	16.01 °C	359.12 µS/cm	1.19 mg/L	1.55 NTU	-48.3 mV		200.00 ml/min
11/12/2024 2:56 PM	54:00	7.40 pH	15.96 °C	359.15 µS/cm	1.13 mg/L	0.93 NTU	-48.5 mV		200.00 ml/min
11/12/2024 2:59 PM	57:00	7.40 pH	16.01 °C	359.19 µS/cm	1.07 mg/L	0.16 NTU	-50.6 mV	31.27 ft	200.00 ml/min
11/12/2024 3:02 PM	01:00:00	7.39 pH	16.13 °C	359.34 µS/cm	1.01 mg/L	0.14 NTU	-51.3 mV		200.00 ml/min
11/12/2024 3:05 PM	01:03:00	7.40 pH	15.93 °C	358.89 µS/cm	0.96 mg/L	0.07 NTU	-52.1 mV	31.27 ft	200.00 ml/min
11/12/2024 3:08 PM	01:06:00	7.39 pH	15.91 °C	358.99 µS/cm	0.90 mg/L	0.01 NTU	-52.5 mV		200.00 ml/min
11/12/2024 3:11 PM	01:09:00	7.39 pH	16.00 °C	359.02 µS/cm	0.85 mg/L	0.16 NTU	-53.2 mV	31.32 ft	200.00 ml/min
11/12/2024 3:14 PM	01:12:00	7.39 pH	15.98 °C	359.01 µS/cm	0.80 mg/L	0.00 NTU	-54.2 mV	31.32 ft	200.00 ml/min
11/12/2024 3:17 PM	01:15:00	7.39 pH	16.09 °C	359.13 µS/cm	0.76 mg/L	0.02 NTU	-55.3 mV	31.40 ft	200.00 ml/min
11/12/2024 3:20 PM	01:18:00	7.38 pH	16.08 °C	358.71 µS/cm	0.73 mg/L	0.00 NTU	-55.8 mV		200.00 ml/min

Samples

Sample ID:	Description:
WAP-8I	

Low-Flow Test Report:

Test Date / Time: 11/12/2024 12:01:18 PM
Project: CULLEY WEST POND NOV 2024 GWM (2)
Operator Name: M. BRETING

Location Name: WAP-8D **Latitude:** **Longitude:** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 97.0 ft** **Total Depth: 107.0 ft**	**Pump Type: Dedicated** **Tubing Type: HDPE** **Pump Intake From TOC: 102.0 ft** **Estimated Total Volume Pumped: 13800 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.16 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 625772**

Test Notes:

Initial depth to Water: 33.20 ft

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
11/12/2024 12:01 PM	00:00	7.25 pH	15.06 °C	293.13 µS/cm	1.60 mg/L	27.11 NTU	-94.5 mV	33.41 ft	200.00 ml/min
11/12/2024 12:04 PM	03:00	7.33 pH	15.02 °C	292.59 µS/cm	1.33 mg/L	33.26 NTU	-104.2 mV	33.38 ft	200.00 ml/min
11/12/2024 12:07 PM	06:00	7.37 pH	15.05 °C	292.23 µS/cm	1.20 mg/L	30.08 NTU	-108.6 mV		200.00 ml/min
11/12/2024 12:10 PM	09:00	7.39 pH	15.06 °C	291.82 µS/cm	1.11 mg/L	6.65 NTU	-112.2 mV	33.38 ft	200.00 ml/min
11/12/2024 12:13 PM	12:00	7.41 pH	14.97 °C	291.10 µS/cm	1.02 mg/L	17.44 NTU	-114.6 mV		200.00 ml/min
11/12/2024 12:16 PM	15:00	7.42 pH	14.86 °C	290.80 µS/cm	0.95 mg/L	12.00 NTU	-116.2 mV	33.38 ft	200.00 ml/min
11/12/2024 12:19 PM	18:00	7.43 pH	14.85 °C	290.99 µS/cm	0.87 mg/L	17.48 NTU	-118.0 mV		200.00 ml/min
11/12/2024 12:22 PM	21:00	7.43 pH	14.97 °C	291.16 µS/cm	0.79 mg/L	5.25 NTU	-119.8 mV	33.38 ft	200.00 ml/min
11/12/2024 12:25 PM	24:00	7.45 pH	15.06 °C	291.12 µS/cm	0.74 mg/L	10.84 NTU	-121.7 mV		200.00 ml/min
11/12/2024 12:28 PM	27:00	7.46 pH	15.10 °C	290.38 µS/cm	0.68 mg/L	6.02 NTU	-123.4 mV	33.38 ft	200.00 ml/min
11/12/2024 12:31 PM	30:00	7.47 pH	15.10 °C	290.00 µS/cm	0.62 mg/L	2.96 NTU	-125.0 mV		200.00 ml/min
11/12/2024 12:34 PM	33:00	7.47 pH	15.27 °C	289.59 µS/cm	0.58 mg/L	3.70 NTU	-126.8 mV		200.00 ml/min
11/12/2024 12:37 PM	36:00	7.48 pH	15.39 °C	289.38 µS/cm	0.53 mg/L	0.83 NTU	-128.4 mV	33.38 ft	200.00 ml/min
11/12/2024 12:40 PM	39:00	7.49 pH	15.34 °C	289.24 µS/cm	0.49 mg/L	1.56 NTU	-129.8 mV	33.38 ft	200.00 ml/min
11/12/2024 12:43 PM	42:00	7.51 pH	15.29 °C	289.28 µS/cm	0.45 mg/L	0.49 NTU	-132.0 mV	33.36 ft	200.00 ml/min

11/12/2024 12:46 PM	45:00	7.52 pH	15.28 °C	288.83 µS/cm	0.42 mg/L	0.47 NTU	-133.3 mV	33.36 ft	200.00 ml/min
11/12/2024 12:49 PM	48:00	7.52 pH	15.43 °C	288.51 µS/cm	0.39 mg/L	1.36 NTU	-134.7 mV	33.36 ft	200.00 ml/min
11/12/2024 12:52 PM	51:00	7.53 pH	15.50 °C	288.38 µS/cm	0.37 mg/L	2.01 NTU	-135.8 mV		200.00 ml/min
11/12/2024 12:55 PM	54:00	7.53 pH	15.41 °C	288.22 µS/cm	0.34 mg/L	2.90 NTU	-136.8 mV	33.36 ft	200.00 ml/min
11/12/2024 12:58 PM	57:00	7.53 pH	15.29 °C	287.92 µS/cm	0.32 mg/L	2.40 NTU	-137.8 mV		200.00 ml/min
11/12/2024 1:01 PM	01:00:00	7.53 pH	15.23 °C	287.64 µS/cm	0.31 mg/L	0.22 NTU	-138.4 mV	33.36 ft	200.00 ml/min
11/12/2024 1:04 PM	01:03:00	7.53 pH	15.46 °C	287.78 µS/cm	0.29 mg/L	3.67 NTU	-139.6 mV		200.00 ml/min
11/12/2024 1:07 PM	01:06:00	7.54 pH	15.46 °C	287.69 µS/cm	0.28 mg/L	0.99 NTU	-140.7 mV	33.36 ft	200.00 ml/min
11/12/2024 1:10 PM	01:09:00	7.54 pH	15.44 °C	287.44 µS/cm	0.27 mg/L	0.00 NTU	-141.2 mV		200.00 ml/min

Samples

Sample ID:	Description:
WAP-8D	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 11/14/2024 10:46:41 AM
Project: Culley West (15)
Operator Name: Jon Hil

Location Name: WAP-9S **Latitude: 37.91300948** **Longitude: -87.33171541** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 54.7 ft** **Total Depth: 64.7 ft** **Initial Depth to Water: 39.84 ft**	**Pump Type: Sample Pro portable** **Tubing Type: LDPE** **Pump Intake From TOC: 59.7 ft** **Estimated Total Volume Pumped: 7200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.07 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
7.2 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/14/2024 10:46 AM	00:00	7.53 pH	16.57 °C	519.09 µS/cm	1.74 mg/L	1,248.3 NTU	168.3 mV	39.84 ft	200.00 ml/min
11/14/2024 10:49 AM	03:00	7.65 pH	16.56 °C	538.59 µS/cm	0.66 mg/L	547.61 NTU	121.7 mV	39.87 ft	200.00 ml/min
11/14/2024 10:52 AM	06:00	7.66 pH	16.55 °C	554.42 µS/cm	0.43 mg/L	211.05 NTU	87.9 mV	39.90 ft	200.00 ml/min
11/14/2024 10:55 AM	09:00	7.69 pH	16.56 °C	557.67 µS/cm	0.34 mg/L	88.25 NTU	66.0 mV	39.90 ft	200.00 ml/min
11/14/2024 10:58 AM	12:00	7.67 pH	16.67 °C	557.59 µS/cm	0.28 mg/L	64.93 NTU	51.9 mV	39.91 ft	200.00 ml/min
11/14/2024 11:01 AM	15:00	7.65 pH	16.66 °C	555.98 µS/cm	0.25 mg/L	38.84 NTU	40.4 mV	39.91 ft	200.00 ml/min
11/14/2024 11:04 AM	18:00	7.68 pH	16.65 °C	556.90 µS/cm	0.23 mg/L	45.64 NTU	31.0 mV	39.91 ft	200.00 ml/min
11/14/2024 11:07 AM	21:00	7.65 pH	16.64 °C	557.00 µS/cm	0.20 mg/L	50.17 NTU	25.6 mV	39.91 ft	200.00 ml/min
11/14/2024 11:10 AM	24:00	7.69 pH	16.64 °C	552.89 µS/cm	0.19 mg/L	32.91 NTU	17.0 mV	39.91 ft	200.00 ml/min
11/14/2024 11:13 AM	27:00	7.66 pH	16.70 °C	562.37 µS/cm	0.19 mg/L	42.49 NTU	13.5 mV	39.91 ft	200.00 ml/min
11/14/2024 11:16 AM	30:00	7.69 pH	16.73 °C	563.09 µS/cm	0.17 mg/L	19.02 NTU	8.4 mV	39.91 ft	200.00 ml/min
11/14/2024 11:19 AM	33:00	7.68 pH	16.78 °C	563.59 µS/cm	0.17 mg/L	20.84 NTU	6.4 mV	39.91 ft	200.00 ml/min
11/14/2024 11:22 AM	36:00	7.70 pH	16.88 °C	563.65 µS/cm	0.16 mg/L	19.09 NTU	3.0 mV	39.91 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 11/14/2024 12:17:10 PM
Project: Culley West (16)
Operator Name: Jon Hil

Location Name: WAP-9I **Latitude: 37.91299824** **Longitude: -87.3318124** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 79.7 ft** **Total Depth: 89.7 ft** **Initial Depth to Water: 40.74 ft**	**Pump Type: Sample Pro portable** **Tubing Type: LDPE** **Pump Intake From TOC: 84.7 ft** **Estimated Total Volume Pumped: 3863.333 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
3.8 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/14/2024 12:17 PM	00:00	7.44 pH	16.88 °C	443.32 µS/cm	0.95 mg/L	15.42 NTU	34.9 mV	40.74 ft	200.00 ml/min
11/14/2024 12:20 PM	03:00	7.50 pH	17.09 °C	444.66 µS/cm	0.40 mg/L	4.28 NTU	-30.7 mV	40.74 ft	200.00 ml/min
11/14/2024 12:23 PM	06:00	7.55 pH	16.94 °C	444.82 µS/cm	0.30 mg/L	0.13 NTU	-48.6 mV	40.74 ft	200.00 ml/min
11/14/2024 12:24 PM	07:19	7.49 pH	16.93 °C	444.92 µS/cm	0.28 mg/L	0.02 NTU	-47.6 mV	40.74 ft	200.00 ml/min
11/14/2024 12:27 PM	10:19	7.55 pH	16.82 °C	445.35 µS/cm	0.24 mg/L	0.01 NTU	-57.1 mV	40.74 ft	200.00 ml/min
11/14/2024 12:30 PM	13:19	7.53 pH	16.83 °C	445.74 µS/cm	0.20 mg/L	0.00 NTU	-60.2 mV	40.74 ft	200.00 ml/min
11/14/2024 12:33 PM	16:19	7.56 pH	16.79 °C	446.19 µS/cm	0.18 mg/L	0.00 NTU	-64.6 mV	40.74 ft	200.00 ml/min
11/14/2024 12:36 PM	19:19	7.53 pH	16.77 °C	446.89 µS/cm	0.17 mg/L	0.00 NTU	-65.2 mV	40.74 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 11/14/2024 1:31:44 PM
Project: Culley West (18)
Operator Name: Jon Hil

Location Name: WAP-9D **Latitude: 37.91304516** **Longitude: -87.33201127** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 116.1 ft** **Total Depth: 126.1 ft** **Initial Depth to Water: 44.25 ft**	**Pump Type: Sample Pro portable** **Tubing Type: LDPE** **Pump Intake From TOC: 121.1 ft** **Estimated Total Volume Pumped: 7800 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 500** **Serial Number: 745345**

Test Notes:
7.8 L purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
11/14/2024 1:31 PM	00:00	7.29 pH	16.81 °C	361.21 µS/cm	1.99 mg/L	7.06 NTU	-51.2 mV	44.25 ft	200.00 ml/min
11/14/2024 1:34 PM	03:00	7.43 pH	16.79 °C	392.43 µS/cm	0.91 mg/L	0.01 NTU	-63.7 mV	44.25 ft	200.00 ml/min
11/14/2024 1:37 PM	06:00	7.47 pH	16.83 °C	395.99 µS/cm	0.63 mg/L	0.00 NTU	-74.1 mV	44.25 ft	200.00 ml/min
11/14/2024 1:40 PM	09:00	7.55 pH	16.74 °C	396.40 µS/cm	0.53 mg/L	0.00 NTU	-83.6 mV	44.25 ft	200.00 ml/min
11/14/2024 1:43 PM	12:00	7.55 pH	16.60 °C	396.70 µS/cm	0.45 mg/L	0.00 NTU	-87.7 mV	44.25 ft	200.00 ml/min
11/14/2024 1:46 PM	15:00	7.52 pH	16.54 °C	396.30 µS/cm	0.39 mg/L	0.03 NTU	-89.3 mV	44.25 ft	200.00 ml/min
11/14/2024 1:49 PM	18:00	7.58 pH	16.52 °C	396.80 µS/cm	0.35 mg/L	0.00 NTU	-94.9 mV	44.25 ft	200.00 ml/min
11/14/2024 1:52 PM	21:00	7.57 pH	16.48 °C	396.85 µS/cm	0.32 mg/L	0.00 NTU	-96.9 mV	44.25 ft	200.00 ml/min
11/14/2024 1:55 PM	24:00	7.53 pH	16.49 °C	396.78 µS/cm	0.28 mg/L	0.00 NTU	-96.9 mV	44.25 ft	200.00 ml/min
11/14/2024 1:58 PM	27:00	7.59 pH	16.44 °C	396.95 µS/cm	0.27 mg/L	0.00 NTU	-101.4 mV	44.25 ft	200.00 ml/min
11/14/2024 2:01 PM	30:00	7.58 pH	16.38 °C	396.87 µS/cm	0.25 mg/L	0.00 NTU	-102.2 mV	44.25 ft	200.00 ml/min
11/14/2024 2:04 PM	33:00	7.55 pH	16.35 °C	396.30 µS/cm	0.23 mg/L	0.00 NTU	-102.1 mV	44.25 ft	200.00 ml/min
11/14/2024 2:07 PM	36:00	7.60 pH	16.36 °C	396.81 µS/cm	0.22 mg/L	0.00 NTU	-105.6 mV	44.25 ft	200.00 ml/min
11/14/2024 2:10 PM	39:00	7.59 pH	16.36 °C	396.85 µS/cm	0.21 mg/L	0.00 NTU	-106.2 mV	44.25 ft	200.00 ml/min

Samples

Sample ID:	Description:

CENTERPOINT ENERGY - FB CULLEY STATION
WEST ASH POND
CCR Groundwater Sampling Event
Gauging Date:
May 12, 2025
Atlas Project No. 170LF01778

WELL ID	DATE	TIME	TOP OF CASING ELEVATION (FT-MSL)	DTW FROM TOC	STATIC WATER ELEVATION (FT-MSL)
West Ash Pond Wells					
CCR-AP-7	5/12/2025	8:57	434.11	4.97	429.14
WAP-1	5/12/2025	14:15	403.39	10.83	392.56
WAP-2RR	5/12/2025	14:00	391.74	32.10	359.64
WAP-3S	5/12/2025	13:37	388.47	29.10	359.37
WAP-3D	5/12/2025	13:42	388.41	29.11	359.30
WAP-4S	5/12/2025	12:45	384.61	25.40	359.21
WAP-4I	5/12/2025	12:49	384.58	25.64	358.94
WAP-4D	5/12/2025	12:53	384.48	28.03	356.45
WAP-5S	5/12/2025	13:16	384.68	23.91	360.77
WAP-5I	5/12/2025	13:20	384.71	23.85	360.86
WAP-5D	5/12/2025	13:23	384.71	24.22	360.49
WAP-6S	5/12/2025	12:10	385.95	26.95	359.00
WAP-6I	5/12/2025	12:13	386.11	28.02	358.09
WAP-6D	5/12/2025	12:16	386.06	32.27	353.79
WAP-7S	5/12/2025	13:50	389.55	30.10	359.45
WAP-7D	5/12/2025	13:53	389.25	29.81	359.44
WAP-8S	5/12/2025	13:00	384.90	25.45	359.45
WAP-8I	5/12/2025	13:04	384.78	25.48	359.30
WAP-8D	5/12/2025	13:09	384.72	27.04	357.68
WAP-9S	5/12/2025	12:22	392.69	33.90	358.79
WAP-9I	5/12/2025	12:27	392.88	35.41	357.47
WAP-9D	5/12/2025	12:31	392.74	39.16	353.58
Temporary Piezometers					
PZ-1	Destroyed				
PZ-2	Destroyed				
PZ-3	Couldn't Locate		394.20	-	-
PZ-4	5/12/2025	14:05	401.60	9.87	391.73
PZ-5	Couldn't Locate		388.00	-	-
PZ-6	5/12/2025	14:10	403.90	9.65	394.25
PZ-7	5/12/2025	14:23	400.80	9.40	391.40
PZ-8	Destroyed				
PZ-9	Destroyed				
PZ-10	Destroyed				

NOTES
DTW= Depth to Water
TOC= Top of Casing

Low-Flow Test Report:

Test Date / Time: 5/16/2025 1:47:41 PM
Project: Culley May 2025 GWM (24)
Operator Name: M. Breting

Location Name: WAP-1 **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 26.0 ft** **Total Depth: 36.0 ft** **Initial Depth to Water: 10.66 ft**	**Pump Type: Hydrasleeve** **Tubing Type: Hydrasleeve** **Estimated Total Volume Pumped: 0 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 0 ml/min** **Final Draw Down: 0 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651965**

Test Notes:

Weather Conditions:
Partly cloudy 80 degrees

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.01	
5/16/2025 1:47 PM	00:00	7.07 pH	28.20 °C	3.93 µS/cm		58.84 NTU	-75.9 mV	10.66 ft	0.00 ml/min
5/16/2025 1:50 PM	03:00	7.07 pH	27.84 °C	957.44 µS/cm	2.72 mg/L	45.51 NTU	-85.4 mV	10.66 ft	0.00 ml/min
5/16/2025 1:53 PM	06:00	7.04 pH	28.33 °C	1,019.2 µS/cm	2.82 mg/L	41.79 NTU	-84.9 mV	10.66 ft	0.00 ml/min

Samples

Sample ID:	Description:
WAP-1	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/13/2025 11:39:09 AM
Project: Culley West (5)
Operator Name: Jon Hill

Location Name: WAP-4S **Latitude: 37.91225356** **Longitude: -87.33095004** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 35.0 ft** **Total Depth: 45.0 ft** **Initial Depth to Water: 25.35 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 40 ft** **Estimated Total Volume Pumped: 6600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.28 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
2.0 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/13/2025 11:39 AM	00:00	7.26 pH	18.44 °C	1,432.2 µS/cm	0.60 mg/L	1,376.4 NTU	-63.3 mV	25.35 ft	200.00 ml/min
5/13/2025 11:42 AM	03:00	7.28 pH	18.19 °C	1,440.4 µS/cm	0.28 mg/L	1,954.0 NTU	-72.7 mV	25.38 ft	200.00 ml/min
5/13/2025 11:45 AM	06:00	7.28 pH	18.24 °C	1,433.7 µS/cm	0.18 mg/L	2,102.9 NTU	-76.2 mV	25.42 ft	200.00 ml/min
5/13/2025 11:48 AM	09:00	7.28 pH	18.35 °C	1,435.3 µS/cm	0.56 mg/L	536.65 NTU	-75.2 mV	25.43 ft	200.00 ml/min
5/13/2025 11:51 AM	12:00	7.26 pH	18.42 °C	1,440.9 µS/cm	0.11 mg/L	92.04 NTU	-80.2 mV	25.45 ft	200.00 ml/min
5/13/2025 11:54 AM	15:00	7.26 pH	18.31 °C	1,436.0 µS/cm	0.09 mg/L	306.56 NTU	-81.7 mV	25.49 ft	200.00 ml/min
5/13/2025 11:57 AM	18:00	7.25 pH	18.54 °C	1,396.4 µS/cm	0.58 mg/L	142.72 NTU	-73.2 mV	25.52 ft	200.00 ml/min
5/13/2025 12:00 PM	21:00	7.25 pH	18.34 °C	1,408.5 µS/cm	0.12 mg/L	94.38 NTU	-80.1 mV	25.55 ft	200.00 ml/min
5/13/2025 12:03 PM	24:00	7.26 pH	18.25 °C	1,412.6 µS/cm	0.10 mg/L	18.99 NTU	-82.0 mV	25.58 ft	200.00 ml/min
5/13/2025 12:06 PM	27:00	7.26 pH	18.47 °C	1,412.6 µS/cm	0.10 mg/L	39.26 NTU	-83.2 mV	25.60 ft	200.00 ml/min
5/13/2025 12:09 PM	30:00	7.27 pH	18.59 °C	1,412.1 µS/cm	0.09 mg/L	15.79 NTU	-84.0 mV	25.61 ft	200.00 ml/min
5/13/2025 12:12 PM	33:00	7.28 pH	18.58 °C	1,408.6 µS/cm	0.09 mg/L	9.89 NTU	-85.5 mV	25.63 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/13/2025 12:40:09 PM
Project: Culley West (6)
Operator Name: Jon Hill

Location Name: WAP-4I **Latitude: 37.91226567** **Longitude: -87.33094842** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 65.0 ft** **Total Depth: 75.0 ft** **Initial Depth to Water: 25.62 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 70.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.06 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
1.0 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/13/2025 12:40 PM	00:00	7.42 pH	17.95 °C	362.22 µS/cm	0.00 mg/L	0.61 NTU	-22.7 mV	25.62 ft	200.00 ml/min
5/13/2025 12:43 PM	03:00	7.35 pH	17.62 °C	355.08 µS/cm	0.06 mg/L	0.35 NTU	-41.1 mV	25.65 ft	200.00 ml/min
5/13/2025 12:46 PM	06:00	7.34 pH	17.50 °C	353.64 µS/cm	0.03 mg/L	0.41 NTU	-44.0 mV	25.66 ft	200.00 ml/min
5/13/2025 12:49 PM	09:00	7.28 pH	17.25 °C	351.80 µS/cm	0.00 mg/L	0.24 NTU	-42.7 mV	25.67 ft	200.00 ml/min
5/13/2025 12:52 PM	12:00	7.25 pH	17.01 °C	349.84 µS/cm	0.00 mg/L	0.37 NTU	-41.8 mV	25.67 ft	200.00 ml/min
5/13/2025 12:55 PM	15:00	7.23 pH	16.97 °C	349.58 µS/cm	0.00 mg/L	0.71 NTU	-41.4 mV	25.67 ft	200.00 ml/min
5/13/2025 12:58 PM	18:00	7.21 pH	16.84 °C	345.73 µS/cm	0.00 mg/L	1.69 NTU	-41.2 mV	25.68 ft	200.00 ml/min

Samples DUP-2-051325 collected.

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/13/2025 1:41:56 PM
Project: Culley West (7)
Operator Name: Jon Hill

Location Name: WAP-4D **Latitude: 37.91225413** **Longitude: -87.33095415** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 106.0 ft** **Total Depth: 116.0 ft** **Initial Depth to Water: 28.03 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 111.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
1.5 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/13/2025 1:41 PM	00:00	7.53 pH	17.68 °C	430.98 µS/cm	0.05 mg/L	0.27 NTU	-143.8 mV	28.03 ft	200.00 ml/min
5/13/2025 1:44 PM	03:00	7.57 pH	17.51 °C	432.07 µS/cm	0.00 mg/L	0.13 NTU	-157.0 mV	28.03 ft	200.00 ml/min
5/13/2025 1:47 PM	06:00	7.55 pH	17.86 °C	431.89 µS/cm	0.00 mg/L	0.06 NTU	-157.5 mV	28.03 ft	200.00 ml/min
5/13/2025 1:50 PM	09:00	7.53 pH	17.50 °C	432.21 µS/cm	0.00 mg/L	0.02 NTU	-158.7 mV	28.03 ft	200.00 ml/min
5/13/2025 1:53 PM	12:00	7.52 pH	17.41 °C	431.14 µS/cm	0.00 mg/L	0.09 NTU	-158.5 mV	28.03 ft	200.00 ml/min
5/13/2025 1:56 PM	15:00	7.51 pH	17.72 °C	431.85 µS/cm	0.00 mg/L	0.01 NTU	-158.4 mV	28.03 ft	200.00 ml/min
5/13/2025 1:59 PM	18:00	7.51 pH	17.66 °C	432.03 µS/cm	0.00 mg/L	0.04 NTU	-159.1 mV	28.03 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/13/2025 8:07:09 AM
Project: Culley West
Operator Name: Jon Hill

Location Name: WAP-5S **Latitude: 39.901696** **Longitude: -86.2604015** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 30.0 ft** **Total Depth: 40.0 ft** **Initial Depth to Water: 23.88 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 35.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.14 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
1 gallon purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/13/2025 8:07 AM	00:00	6.65 pH	18.57 °C	1,624.5 µS/cm	0.04 mg/L	0.73 NTU	-21.1 mV	23.88 ft	200.00 ml/min
5/13/2025 8:10 AM	03:00	6.65 pH	18.67 °C	1,619.2 µS/cm	0.04 mg/L	0.31 NTU	-19.1 mV	23.90 ft	200.00 ml/min
5/13/2025 8:13 AM	06:00	6.66 pH	18.66 °C	1,615.2 µS/cm	0.02 mg/L	0.12 NTU	-18.5 mV	23.92 ft	200.00 ml/min
5/13/2025 8:16 AM	09:00	6.67 pH	18.76 °C	1,608.4 µS/cm	0.01 mg/L	0.00 NTU	-17.5 mV	23.95 ft	200.00 ml/min
5/13/2025 8:19 AM	12:00	6.67 pH	18.72 °C	1,603.0 µS/cm	0.01 mg/L	0.00 NTU	-16.9 mV	23.97 ft	200.00 ml/min
5/13/2025 8:22 AM	15:00	6.67 pH	18.83 °C	1,591.6 µS/cm	0.00 mg/L	0.14 NTU	-17.4 mV	24.00 ft	200.00 ml/min
5/13/2025 8:25 AM	18:00	6.67 pH	18.77 °C	1,586.0 µS/cm	0.03 mg/L	0.07 NTU	-16.1 mV	24.02 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/13/2025 9:12:20 AM
Project: Culley West (2)
Operator Name: Jon Hill

Location Name: WAP-5I **Latitude: 37.91180292** **Longitude: -87.33027503** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 65.0 ft** **Total Depth: 75.0 ft** **Initial Depth to Water: 23.86 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 70.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.06 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
1.0 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/13/2025 9:12 AM	00:00	7.33 pH	17.86 °C	365.69 µS/cm	0.12 mg/L	14.60 NTU	-11.6 mV	23.86 ft	200.00 ml/min
5/13/2025 9:15 AM	03:00	7.29 pH	17.32 °C	364.87 µS/cm	0.00 mg/L	9.62 NTU	-30.6 mV	23.87 ft	200.00 ml/min
5/13/2025 9:18 AM	06:00	7.34 pH	17.35 °C	356.28 µS/cm	0.00 mg/L	62.68 NTU	-36.7 mV	23.89 ft	200.00 ml/min
5/13/2025 9:21 AM	09:00	7.30 pH	17.23 °C	355.31 µS/cm	0.00 mg/L	160.73 NTU	-35.9 mV	23.90 ft	200.00 ml/min
5/13/2025 9:24 AM	12:00	7.27 pH	17.25 °C	357.39 µS/cm	0.00 mg/L	64.47 NTU	-37.5 mV	23.90 ft	200.00 ml/min
5/13/2025 9:27 AM	15:00	7.26 pH	17.11 °C	360.92 µS/cm	0.00 mg/L	30.00 NTU	-42.1 mV	23.91 ft	200.00 ml/min
5/13/2025 9:30 AM	18:00	7.26 pH	17.20 °C	356.02 µS/cm	0.00 mg/L	8.13 NTU	-43.6 mV	23.92 ft	200.00 ml/min

Samples DUP-1-051325 collected.

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/13/2025 10:35:09 AM
Project: Culley West (4)
Operator Name: Jon Hill

Location Name: WAP-5D **Latitude: 37.91177474** **Longitude: -87.33026107** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 103.0 ft** **Total Depth: 113.0 ft** **Initial Depth to Water: 24.22 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 108.0 ft** **Estimated Total Volume Pumped: 4800 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.06 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
1.25 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/13/2025 10:35 AM	00:00	7.25 pH	19.28 °C	420.95 µS/cm	0.19 mg/L	1.15 NTU	-119.9 mV	24.22 ft	200.00 ml/min
5/13/2025 10:38 AM	03:00	7.29 pH	19.06 °C	424.85 µS/cm	0.22 mg/L	0.28 NTU	-105.9 mV	24.25 ft	200.00 ml/min
5/13/2025 10:41 AM	06:00	7.32 pH	18.97 °C	424.32 µS/cm	0.18 mg/L	0.46 NTU	-109.9 mV	24.25 ft	200.00 ml/min
5/13/2025 10:44 AM	09:00	7.34 pH	19.16 °C	425.88 µS/cm	0.15 mg/L	0.20 NTU	-112.8 mV	24.25 ft	200.00 ml/min
5/13/2025 10:47 AM	12:00	7.35 pH	18.83 °C	424.24 µS/cm	0.22 mg/L	0.14 NTU	-114.9 mV	24.25 ft	200.00 ml/min
5/13/2025 10:50 AM	15:00	7.36 pH	18.78 °C	425.67 µS/cm	0.22 mg/L	0.16 NTU	-116.3 mV	24.27 ft	200.00 ml/min
5/13/2025 10:53 AM	18:00	7.36 pH	18.63 °C	426.14 µS/cm	0.02 mg/L	0.13 NTU	-117.3 mV	24.28 ft	200.00 ml/min
5/13/2025 10:56 AM	21:00	7.36 pH	18.78 °C	426.29 µS/cm	0.00 mg/L	0.05 NTU	-118.2 mV	24.28 ft	200.00 ml/min
5/13/2025 10:59 AM	24:00	7.36 pH	18.94 °C	427.22 µS/cm	0.00 mg/L	0.13 NTU	-119.2 mV	24.28 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/14/2025 11:08:57 AM
Project: Culley West (10)
Operator Name: Jon Hill

Location Name: WAP-6S **Latitude: 37.91295832** **Longitude: -87.33165515** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 40.0 ft** **Total Depth: 50.0 ft** **Initial Depth to Water: 27.06 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 45.0 ft** **Estimated Total Volume Pumped: 5400 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
1.25 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/14/2025 11:08 AM	00:00	7.06 pH	18.86 °C	482.64 µS/cm	0.38 mg/L	138.66 NTU	-34.8 mV	27.06 ft	200.00 ml/min
5/14/2025 11:11 AM	03:00	7.08 pH	18.93 °C	482.82 µS/cm	0.30 mg/L	85.01 NTU	-44.2 mV	27.06 ft	200.00 ml/min
5/14/2025 11:14 AM	06:00	7.10 pH	18.99 °C	492.52 µS/cm	0.26 mg/L	55.30 NTU	-56.4 mV	27.06 ft	200.00 ml/min
5/14/2025 11:17 AM	09:00	7.12 pH	18.94 °C	505.29 µS/cm	0.25 mg/L	33.36 NTU	-66.2 mV	27.06 ft	200.00 ml/min
5/14/2025 11:20 AM	12:00	7.14 pH	19.05 °C	488.44 µS/cm	0.21 mg/L	24.11 NTU	-74.8 mV	27.06 ft	200.00 ml/min
5/14/2025 11:23 AM	15:00	7.16 pH	19.07 °C	503.73 µS/cm	0.21 mg/L	21.73 NTU	-80.9 mV	27.06 ft	200.00 ml/min
5/14/2025 11:26 AM	18:00	7.19 pH	19.16 °C	487.96 µS/cm	0.18 mg/L	10.47 NTU	-89.3 mV	27.06 ft	200.00 ml/min
5/14/2025 11:29 AM	21:00	7.21 pH	19.29 °C	498.79 µS/cm	0.15 mg/L	9.97 NTU	-91.8 mV	27.06 ft	200.00 ml/min
5/14/2025 11:32 AM	24:00	7.23 pH	19.29 °C	487.20 µS/cm	0.14 mg/L	6.19 NTU	-95.3 mV	27.06 ft	200.00 ml/min
5/14/2025 11:35 AM	27:00	7.24 pH	19.36 °C	496.87 µS/cm	0.13 mg/L	9.44 NTU	-96.5 mV	27.06 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/14/2025 10:23:05 AM
Project: Culley West (9)
Operator Name: Jon Hill

Location Name: WAP-6I **Latitude: 37.91299785** **Longitude: -87.3316737** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 70.0 ft** **Total Depth: 80.0 ft** **Initial Depth to Water: 28.08 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 75.0 ft** **Estimated Total Volume Pumped: 3600 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.04 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
1.0 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/14/2025 10:23 AM	00:00	7.48 pH	19.31 °C	359.74 µS/cm	0.26 mg/L	1.59 NTU	-112.0 mV	28.08 ft	200.00 ml/min
5/14/2025 10:26 AM	03:00	7.47 pH	19.30 °C	357.68 µS/cm	0.23 mg/L	0.63 NTU	-112.6 mV	28.08 ft	200.00 ml/min
5/14/2025 10:29 AM	06:00	7.49 pH	19.37 °C	355.74 µS/cm	0.21 mg/L	0.90 NTU	-113.7 mV	28.10 ft	200.00 ml/min
5/14/2025 10:32 AM	09:00	7.49 pH	19.40 °C	352.69 µS/cm	0.19 mg/L	0.20 NTU	-115.3 mV	28.11 ft	200.00 ml/min
5/14/2025 10:35 AM	12:00	7.50 pH	19.42 °C	356.18 µS/cm	0.18 mg/L	0.31 NTU	-116.2 mV	28.11 ft	200.00 ml/min
5/14/2025 10:38 AM	15:00	7.49 pH	19.44 °C	349.71 µS/cm	0.17 mg/L	0.48 NTU	-116.8 mV	28.12 ft	200.00 ml/min
5/14/2025 10:41 AM	18:00	7.50 pH	19.48 °C	351.94 µS/cm	0.17 mg/L	0.90 NTU	-118.1 mV	28.12 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/14/2025 8:48:30 AM
Project: Culley West (8)
Operator Name: Jon Hill

Location Name: WAP-6D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 105.5 ft** **Total Depth: 115.5 ft** **Initial Depth to Water: 32.32 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 110.5 ft** **Estimated Total Volume Pumped: 5400 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.03 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
1.25 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/14/2025 8:48 AM	00:00	7.38 pH	18.73 °C	395.79 µS/cm	0.77 mg/L	3.20 NTU	-135.1 mV	32.32 ft	200.00 ml/min
5/14/2025 8:51 AM	03:00	7.48 pH	18.90 °C	397.38 µS/cm	0.85 mg/L	5.91 NTU	-121.0 mV	32.32 ft	200.00 ml/min
5/14/2025 8:54 AM	06:00	7.51 pH	19.02 °C	396.20 µS/cm	0.48 mg/L	196.74 NTU	-119.1 mV	32.33 ft	200.00 ml/min
5/14/2025 8:57 AM	09:00		28.19 °C	576.48 µS/cm				32.34 ft	200.00 ml/min
5/14/2025 9:00 AM	12:00	7.48 pH	19.06 °C	399.05 µS/cm	0.14 mg/L	179.33 NTU	-107.0 mV	32.34 ft	200.00 ml/min
5/14/2025 9:03 AM	15:00	7.55 pH	19.02 °C	399.42 µS/cm	0.03 mg/L	208.81 NTU	-134.8 mV	32.34 ft	200.00 ml/min
5/14/2025 9:06 AM	18:00	7.52 pH	18.89 °C	400.35 µS/cm	0.12 mg/L	33.65 NTU	-141.9 mV	32.34 ft	200.00 ml/min
5/14/2025 9:09 AM	21:00	7.52 pH	18.94 °C	399.81 µS/cm	0.08 mg/L	4.98 NTU	-146.7 mV	32.35 ft	200.00 ml/min
5/14/2025 9:12 AM	24:00	7.55 pH	18.97 °C	399.91 µS/cm	0.08 mg/L	0.60 NTU	-150.3 mV	32.35 ft	200.00 ml/min
5/14/2025 9:15 AM	27:00	7.53 pH	18.90 °C	400.39 µS/cm	0.09 mg/L	2.34 NTU	-151.0 mV	32.35 ft	200.00 ml/min

Samples MS/MSD-1 and Field Blank collected.

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/16/2025 10:59:17 AM
Project: Culley May 2025 GWM (23)
Operator Name: M. Breting

Location Name: WAP-8D **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 97 ft** **Total Depth: 107 ft** **Initial Depth to Water: 33.02 ft**	**Pump Type: Dedicated** **Tubing Type: HDPE** **Pump Intake From TOC: 102 ft** **Estimated Total Volume Pumped: 18983.334 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: -1.12 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651965**

Test Notes:

Aquatroll became unresponsive after 54 minutes while briefly away from nest. Restarted device/connection to tablet and resumed data collection.

Weather Conditions:
Cloudy 70 storm chances

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 3 %	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.01	
5/16/2025 10:59 AM	00:00	6.95 pH	18.02 °C	361.24 µS/cm	2.03 mg/L	64.09 NTU	55.9 mV		200.00 ml/min
5/16/2025 11:02 AM	03:00	7.12 pH	18.17 °C	411.88 µS/cm	0.46 mg/L	23.71 NTU	-33.8 mV		200.00 ml/min
5/16/2025 11:05 AM	06:00	7.22 pH	18.18 °C	426.21 µS/cm	0.30 mg/L	6.13 NTU	-49.6 mV	31.90 ft	200.00 ml/min
5/16/2025 11:08 AM	09:00	7.25 pH	18.27 °C	430.53 µS/cm	0.24 mg/L	3.19 NTU	-55.4 mV		200.00 ml/min
5/16/2025 11:11 AM	12:00	7.29 pH	18.23 °C	431.83 µS/cm	0.23 mg/L	0.83 NTU	-60.6 mV	31.67 ft	200.00 ml/min
5/16/2025 11:14 AM	15:00	7.30 pH	18.32 °C	431.92 µS/cm	0.20 mg/L	0.30 NTU	-63.0 mV		200.00 ml/min
5/16/2025 11:17 AM	18:00	7.32 pH	18.32 °C	432.06 µS/cm	0.20 mg/L	0.07 NTU	-65.8 mV		200.00 ml/min
5/16/2025 11:20 AM	21:00	7.33 pH	18.42 °C	430.94 µS/cm	0.17 mg/L	5.75 NTU	-67.2 mV	31.40 ft	200.00 ml/min
5/16/2025 11:23 AM	24:00	7.35 pH	18.28 °C	431.64 µS/cm	0.14 mg/L	0.53 NTU	-69.2 mV		200.00 ml/min
5/16/2025 11:26 AM	27:00	7.35 pH	18.33 °C	431.22 µS/cm	0.12 mg/L	1.14 NTU	-71.6 mV		200.00 ml/min
5/16/2025 11:29 AM	30:00	7.37 pH	18.37 °C	431.63 µS/cm	0.11 mg/L	0.23 NTU	-73.3 mV		200.00 ml/min
5/16/2025 11:32 AM	33:00	7.37 pH	18.31 °C	431.32 µS/cm	0.13 mg/L	13.74 NTU	-75.1 mV		200.00 ml/min
5/16/2025 11:35 AM	36:00	7.37 pH	18.41 °C	431.43 µS/cm	0.09 mg/L	73.46 NTU	-76.0 mV		200.00 ml/min

5/16/2025 11:38 AM	39:00	7.38 pH	18.43 °C	430.95 µS/cm	0.11 mg/L	2.58 NTU	-77.5 mV		200.00 ml/min
5/16/2025 11:41 AM	42:00	7.37 pH	18.54 °C	430.90 µS/cm	0.14 mg/L	0.58 NTU	-77.7 mV	31.81 ft	200.00 ml/min
5/16/2025 11:44 AM	45:00	7.39 pH	18.66 °C	430.68 µS/cm	0.13 mg/L	0.22 NTU	-78.6 mV		200.00 ml/min
5/16/2025 11:47 AM	48:00	7.36 pH	19.80 °C	432.96 µS/cm	0.16 mg/L	0.11 NTU	-75.2 mV	31.90 ft	200.00 ml/min
5/16/2025 11:50 AM	51:00	7.33 pH	21.23 °C	433.86 µS/cm	0.18 mg/L	0.16 NTU	-73.7 mV		200.00 ml/min
5/16/2025 11:53 AM	54:00	7.34 pH	22.13 °C	433.46 µS/cm	0.40 mg/L	0.30 NTU	-76.6 mV		200.00 ml/min
5/16/2025 12:19 PM	01:20:20	7.31 pH	31.55 °C	444.22 µS/cm		3.27 NTU	-73.3 mV		200.00 ml/min
5/16/2025 12:25 PM	01:25:55	7.74 pH	20.47 °C	426.37 µS/cm		49.76 NTU	-82.8 mV		200.00 ml/min
5/16/2025 12:28 PM	01:28:55	7.75 pH	18.98 °C	430.11 µS/cm	0.00 mg/L	9.19 NTU	-91.1 mV		200.00 ml/min
5/16/2025 12:31 PM	01:31:55	7.75 pH	19.23 °C	429.78 µS/cm	0.00 mg/L	3.08 NTU	-97.0 mV		200.00 ml/min
5/16/2025 12:34 PM	01:34:55	7.75 pH	18.87 °C	431.00 µS/cm	0.00 mg/L	1.36 NTU	-100.8 mV		200.00 ml/min

Samples

Sample ID:	Description:
WAP-8D	

Low-Flow Test Report:

Test Date / Time: 5/14/2025 2:40:19 PM
Project: Culley West (13)
Operator Name: Jon Hill

Location Name: WAP-9S **Latitude: 37.91303215** **Longitude: -87.33183482** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 55.0 ft** **Total Depth: 65.0 ft** **Initial Depth to Water: 33.92 ft**	**Pump Type: Portable bladder** **Tubing Type: LDPE** **Pump Intake From TOC: 60.0 ft** **Estimated Total Volume Pumped: 10800 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.00 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
3.0 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/14/2025 2:40 PM	00:00	7.50 pH	20.79 °C	722.10 µS/cm	0.15 mg/L	369.03 NTU	-108.4 mV	33.92 ft	200.00 ml/min
5/14/2025 2:43 PM	03:00	7.45 pH	21.70 °C	722.15 µS/cm	0.11 mg/L	675.96 NTU	-102.8 mV	33.92 ft	200.00 ml/min
5/14/2025 2:46 PM	06:00	7.42 pH	20.00 °C	719.62 µS/cm	0.11 mg/L	477.55 NTU	-99.3 mV	33.92 ft	200.00 ml/min
5/14/2025 2:49 PM	09:00	7.38 pH	20.80 °C	720.88 µS/cm	0.09 mg/L	333.42 NTU	-98.3 mV		200.00 ml/min
5/14/2025 2:52 PM	12:00	7.36 pH	20.90 °C	719.82 µS/cm	0.08 mg/L	189.88 NTU	-97.5 mV		200.00 ml/min
5/14/2025 2:55 PM	15:00	7.35 pH	21.22 °C	732.56 µS/cm	0.45 mg/L	154.78 NTU	-91.1 mV		200.00 ml/min
5/14/2025 2:58 PM	18:00	7.34 pH	20.74 °C	727.58 µS/cm	0.14 mg/L	115.27 NTU	-94.6 mV		200.00 ml/min
5/14/2025 3:01 PM	21:00	7.34 pH	20.23 °C	726.67 µS/cm	0.12 mg/L	100.56 NTU	-94.4 mV		200.00 ml/min
5/14/2025 3:04 PM	24:00	7.33 pH	21.02 °C	728.35 µS/cm	0.12 mg/L	65.39 NTU	-95.5 mV		200.00 ml/min
5/14/2025 3:07 PM	27:00	7.33 pH	21.37 °C	727.62 µS/cm	0.12 mg/L	59.58 NTU	-95.5 mV		200.00 ml/min
5/14/2025 3:10 PM	30:00	7.32 pH	21.50 °C	728.15 µS/cm	0.11 mg/L	50.03 NTU	-96.0 mV		200.00 ml/min
5/14/2025 3:13 PM	33:00	7.34 pH	20.68 °C	725.33 µS/cm	0.11 mg/L	44.40 NTU	-96.9 mV		200.00 ml/min
5/14/2025 3:16 PM	36:00	7.35 pH	21.13 °C	725.53 µS/cm	0.10 mg/L	39.99 NTU	-98.3 mV		200.00 ml/min
5/14/2025 3:19 PM	39:00	7.37 pH	20.71 °C	721.59 µS/cm	0.10 mg/L	31.46 NTU	-98.9 mV		200.00 ml/min
5/14/2025 3:22 PM	42:00	7.38 pH	20.18 °C	723.02 µS/cm	0.10 mg/L	30.49 NTU	-100.4 mV		200.00 ml/min

5/14/2025 3:25 PM	45:00	7.38 pH	20.12 °C	723.22 µS/cm	0.11 mg/L	25.92 NTU	-100.9 mV		200.00 ml/min
5/14/2025 3:28 PM	48:00	7.39 pH	20.06 °C	722.76 µS/cm	0.10 mg/L	22.05 NTU	-101.5 mV	33.92 ft	200.00 ml/min
5/14/2025 3:31 PM	51:00	7.42 pH	19.97 °C	724.58 µS/cm	0.00 mg/L	23.79 NTU	-102.0 mV	33.92 ft	200.00 ml/min
5/14/2025 3:34 PM	54:00	7.39 pH	20.09 °C	723.48 µS/cm	0.00 mg/L	19.82 NTU	-102.0 mV	33.92 ft	200.00 ml/min

Samples

Sample ID:	Description:

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 5/14/2025 1:32:07 PM
Project: Culley West (12)
Operator Name: Jon Hill

Location Name: WAP-9I **Latitude: 37.91296857** **Longitude: -87.33172848** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 80.0 ft** **Total Depth: 90.0 ft** **Initial Depth to Water: 35.48 ft**	**Pump Type: Portable bladder** **Tubing Type: LDPE** **Pump Intake From TOC: 85.0 ft** **Estimated Total Volume Pumped: 4200 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.03 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
1.0 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/14/2025 1:32 PM	00:00	7.41 pH	20.13 °C	478.47 µS/cm	0.18 mg/L	0.77 NTU	-117.4 mV	35.48 ft	200.00 ml/min
5/14/2025 1:35 PM	03:00	7.32 pH	20.17 °C	478.19 µS/cm	0.15 mg/L	0.44 NTU	-111.9 mV	35.50 ft	200.00 ml/min
5/14/2025 1:38 PM	06:00	7.27 pH	20.34 °C	479.66 µS/cm	0.09 mg/L	0.35 NTU	-109.9 mV	35.50 ft	200.00 ml/min
5/14/2025 1:41 PM	09:00	7.24 pH	20.41 °C	478.30 µS/cm	0.00 mg/L	0.27 NTU	-108.7 mV	35.50 ft	200.00 ml/min
5/14/2025 1:44 PM	12:00	7.21 pH	20.40 °C	477.90 µS/cm	0.07 mg/L	0.32 NTU	-107.0 mV	35.51 ft	200.00 ml/min
5/14/2025 1:47 PM	15:00	7.20 pH	20.13 °C	477.02 µS/cm	0.09 mg/L	0.29 NTU	-106.4 mV	35.51 ft	200.00 ml/min
5/14/2025 1:50 PM	18:00	7.19 pH	19.81 °C	476.74 µS/cm	0.10 mg/L	0.19 NTU	-106.0 mV	35.51 ft	200.00 ml/min
5/14/2025 1:53 PM	21:00	7.18 pH	20.24 °C	477.27 µS/cm	0.10 mg/L	0.25 NTU	-105.8 mV	35.51 ft	200.00 ml/min

Samples

Sample ID:	Description:

Low-Flow Test Report:

Test Date / Time: 5/14/2025 12:23:42 PM
Project: Culley West (11)
Operator Name: Jon Hill

Location Name: WAP-9D **Latitude: 37.91307098** **Longitude: -87.33183258** **Well Diameter: 2 in** **Casing Type: PVC** **Screen Length: 10 ft** **Top of Screen: 116.5 ft** **Total Depth: 126.5 ft** **Initial Depth to Water: 39.2 ft**	**Pump Type: Dedicated** **Tubing Type: LDPE** **Pump Intake From TOC: 121.5 ft** **Estimated Total Volume Pumped: 4800 ml** **Flow Cell Volume: 130 ml** **Final Flow Rate: 200 ml/min** **Final Draw Down: 0.02 ft**	**Instrument Used: Aqua TROLL 600** **Serial Number: 651971**

Test Notes:
1.0 gallons purged

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10		
5/14/2025 12:23 PM	00:00	7.31 pH	22.22 °C	393.67 µS/cm	1.30 mg/L	5.53 NTU	-147.4 mV	39.20 ft	200.00 ml/min
5/14/2025 12:26 PM	03:00	7.33 pH	21.25 °C	383.14 µS/cm	0.81 mg/L	2.74 NTU	-160.8 mV	39.20 ft	200.00 ml/min
5/14/2025 12:29 PM	06:00	7.33 pH	21.26 °C	383.40 µS/cm	0.52 mg/L	1.92 NTU	-163.2 mV	39.20 ft	200.00 ml/min
5/14/2025 12:32 PM	09:00	7.34 pH	20.24 °C	381.09 µS/cm	0.07 mg/L	1.23 NTU	-164.9 mV	39.20 ft	200.00 ml/min
5/14/2025 12:35 PM	12:00	7.37 pH	20.02 °C	379.98 µS/cm	0.29 mg/L	0.84 NTU	-167.1 mV	39.20 ft	200.00 ml/min
5/14/2025 12:38 PM	15:00	7.41 pH	20.27 °C	378.26 µS/cm	0.43 mg/L	0.89 NTU	-168.6 mV	39.21 ft	200.00 ml/min
5/14/2025 12:41 PM	18:00	7.45 pH	20.93 °C	376.50 µS/cm	0.41 mg/L	0.67 NTU	-168.9 mV	39.22 ft	200.00 ml/min
5/14/2025 12:44 PM	21:00	7.50 pH	20.61 °C	373.45 µS/cm	0.40 mg/L	0.98 NTU	-166.4 mV	39.22 ft	200.00 ml/min
5/14/2025 12:47 PM	24:00	7.52 pH	20.90 °C	372.56 µS/cm	0.40 mg/L	0.65 NTU	-163.4 mV	39.22 ft	200.00 ml/min

Samples

Sample ID:	Description:

LOW FLOW SAMPLING FORM

HALEY ALDRICH

PROJECT	F.B. Culley Generating Station - West Ash Pond	H&A FILE NO.	0129420
LOCATION	Newburgh, Indiana	PROJECT MGR.	Neal Kochis
CLIENT	Southern Indiana Gas and Electric Company	FIELD REP.	F. Reed
CONTRACTOR	Atlas	SAMPLING DATE	05/30/25

Sampling Data:

Well ID:	WAP-2RR	Well Depth as Built:	56.0 ft	Well Diameter:	2.0 in	Sampling Device:	Bladder Pump
Start time:	11:19	Well Depth Measured:	ft	Initial Depth To Water:	36.48 ft	Field Parameter Device:	Horiba U-52
Finish Time:	11:50	Depth To Top Of Screen:	46.0 ft	Depth Of Pump Intake:	ft	Tubing Present In Well:	☒ Yes ☐ No
		Depth To Bottom Of Scree	56.0 ft	Measuring Point:	Top of Casing (TOC)	Tubing Type:	Polyethylene

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (ms/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
Stabilized within →		[100 mL/min] to [500 mL/min]		-	NA	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
11:19	36.99	-	360	1.0	19.49	6.75	0.838	2.45	2.8	342	
11:24	36.49	-	360	2.8	19.31	6.84	0.816	0.69	0.0	338	
11:29	36.49	-	360	4.2	19.37	6.86	0.818	0.99	0.0	336	
11:34	36.50	-	360	6.0	19.42	6.87	0.820	0.37	0.0	339	
11:39	36.50	-	400	8.0	19.52	6.88	0.821	0.35	0.0	332	
11:44	36.50	-	400	10.0	19.29	6.89	0.823	0.33	0.0	330	
11:49	36.50	-	400	12.0	19.51	6.88	0.824	0.32	0.0	328	
											12.5L purged total

Sample ID:	WAP-2RR-053025	Date:	05/30/25	Time:	11:50	QAQC Samples:	N/A

well volume = 3.14 (PI) x radius² x height of water column. 2 in well = 0.163 gal/ft, 3 in = 0.367 gal/ft 4 in = 0.653 gal/ft, 6 in = 1.469 gal/ft, 1 cu. ft. = 7.48 gal, 1 gal = 3.785 L, 1L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

PROJECT	F.B. Culley Generating Station - West Ash Pond	H&A FILE NO.	0129420
LOCATION	Newburgh, Indiana	PROJECT MGR.	Neal Kochis
CLIENT	Southern Indiana Gas and Electric Company	FIELD REP.	F. Reed
CONTRACTOR	Atlas	SAMPLING DATE	05/30/25

Sampling Data:		Well Depth as Built:	70.0 ft	Well Diameter:	2.0 in	Sampling Device:	Bladder Pump
Well ID:	WAP-3S	Well Depth Measured:	ft	Initial Depth To Water:	39.43 ft	Field Parameter Device:	Horiba U-52
Start time:	14:06	Depth To Top Of Screen:	60.0 ft	Depth Of Pump Intake:	ft	Tubing Present In Well:	☒ Yes ☐ No
Finish Time:	15:05	Depth To Bottom Of Scree	70.0 ft	Measuring Point:	Top of Casing (TOC)	Tubing Type:	Polyethylene

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity	Dissolved Oxygen	Turbidity	ORP/eH	Comments
Stabilized within →		[100 mL/min] to [500 mL/min]		-	NA	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
14:06	39.44	–	300	0.5	20.22	9.53	0.785	250	10.9	180	
14:11	39.43	–	300	2.0	19.70	9.11	0.778	0.88	5.2	175	
14:16	39.44	–	300	3.5	19.57	8.87	0.781	0.49	2.8	159	
14:21	39.45	–	300	5.0	19.39	8.72	0.785	0.43	1.5	144	
14:26	39.47	–	300	6.5	19.30	8.61	0.788	0.41	1.4	130	
14:31	39.49	–	300	8.0	19.00	8.53	0.791	0.42	1.0	120	
14:36	39.48	–	300	9.5	18.96	8.47	0.794	0.39	1.2	110	
14:41	39.48	–	300	11.0	19.09	8.43	0.796	0.40	1.4	101	
14:46	39.48	–	300	12.5	19.10	8.39	0.798	0.39	1.4	93	
14:51	39.48	–	300	14.0	19.22	8.36	0.800	0.38	1.1	86	
14:56	39.48	–	300	15.5	19.72	8.33	0.799	0.38	1.0	80	
14:58	39.48	–	300	16.4	19.76	8.32	0.800	0.37	0.9	77	
15:01	39.48	–	300	17.3	19.81	8.31	0.800	0.37	1.1	73	
											18L purged total

Sample ID:	WAP-3S-053025	Date:	05/30/25	Time:	15:05	QAQC Samples:	

well volume = 3.14 (PI) x radius² x height of water column. 2 in well = 0.163 gal/ft, 3 in = 0.367 gal/ft 4 in = 0.653 gal/ft, 6 in = 1.469 gal/ft, 1 cu. ft. = 7.48 gal, 1 gal = 3.785 L, 1L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

PROJECT	F.B. Culley Generating Station - West Ash Pond	H&A FILE NO.	0129420
LOCATION	Newburgh, Indiana	PROJECT MGR.	Neal Kochis
CLIENT	Southern Indiana Gas and Electric Company	FIELD REP.	F.Reed
CONTRACTOR	Atlas	SAMPLING DATE	05/30/25

Sampling Data:		Well Depth as Built:	82.5 ft	Well Diameter:	2.0 in	Sampling Device:	Bladder Pump
Well ID:	WAP-3D	Well Depth Measured:	ft	Initial Depth To Water:	34.49 ft	Field Parameter Device:	Horiba U-52
Start time:	15:20	Depth To Top Of Screen:	72.5 ft	Depth Of Pump Intake:	ft	Tubing Present In Well:	☒ Yes ☐ No
Finish Time:	15:55	Depth To Bottom Of Scree	82.5 ft	Measuring Point:	Top of Casing (TOC)	Tubing Type:	Polyethylene

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (ms/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
Stabilized within →		[100 mL/min] to [500 mL/min]		-	NA	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
15:20	34.49	–	300	1.5	19.80	8.05	0.955	1.79	0.0	99	
15:25	34.47	–	300	3.0	19.28	8.07	1.02	0.57	0.0	97	
15:30	34.49	–	300	4.5	19.63	8.07	1.02	0.44	0.0	95	
15:35	34.49	–	300	6.0	19.70	8.07	1.03	0.45	0.0	95	
15:40	34.47	–	300	7.5	19.73	8.05	1.03	0.39	0.0	96	
15:45	34.47	–	300	9.0	19.83	8.05	1.03	0.39	0.0	96	
15:50	34.47	–	300	10.5	19.47	8.04	1.03	0.39	0.0	97	
											11 L purged total

Sample ID:	WAP-3D-053025	Date:	05/30/25	Time:	1555	QAQC Samples:	N/A

well volume = 3.14 (PI) x radius² x height of water column. 2 in well = 0.163 gal/ft, 3 in = 0.367 gal/ft 4 in = 0.653 gal/ft, 6 in = 1.469 gal/ft, 1 cu. ft. = 7.48 gal, 1 gal = 3.785 L, 1L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

PROJECT	F.B. Culley Generating Station - West Ash Pond	**H&A FILE NO.**	0129420
LOCATION	Newburgh, Indiana	**PROJECT MGR.**	Neal Kochis
CLIENT	Southern Indiana Gas and Electric Company	**FIELD REP.**	F. Reed
CONTRACTOR	Atlas	**SAMPLING DATE**	05/30/25

Sampling Data:

Well ID:	WAP-7S	Well Depth as Built:	60.0 ft	Well Diameter:	2.0 in	Sampling Device:	Bladder Pump
Start time:	13:10	Well Depth Measured:	ft	Initial Depth To Water:	34.82 ft	Field Parameter Device:	Horiba U-52
Finish Time:	13:45	Depth To Top Of Screen:	50.0 ft	Depth Of Pump Intake:	ft	Tubing Present In Well:	☒ Yes ☐ No
		Depth To Bottom Of Scree	60.0 ft	Measuring Point:	Top of Casing (TOC)	Tubing Type:	Polyethylene

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (~~ml/min~~) or (gal/min)	Cumulative Purge Vol. (~~liters~~) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (ms/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
Stabilized within →		[100 mL/min] to [500 mL/min]		-	NA	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
13:10	34.89	-	300	1.0	19.55	7.49	2.21	0.90	1.8	137	
13:15	34.85	-	300	2.5	20.13	10.05	0.996	0.69	0.2	143	
13:20	34.83	-	300	4.0	20.21	10.31	0.971	0.38	0.0	142	
13:25	34.89	-	300	5.5	20.31	10.90	0.969	0.34	0.0	142	
13:30	34.83	-	300	7.0	20.00	10.48	0.967	0.33	0.0	143	
13:35	34.86	-	300	8.5	20.26	10.51	0.969	0.31	0.0	143	
13:40	34.88	-	300	10.0	20.35	10.53	0.963	0.31	0.0	143	
											10.5 L purged total

Sample ID:	WAP-7S-053029	Date:	05/30/25	Time:	13:45	QAQC Samples:

well volume = 3.14 (PI) x radius² x height of water column. 2 in well = 0.163 gal/ft, 3 in = 0.367 gal/ft 4 in = 0.653 gal/ft, 6 in = 1.469 gal/ft, 1 cu. ft. = 7.48 gal, 1 gal = 3.785 L, 1L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

HALEY ALDRICH

Page 1 of 1

PROJECT	FB Culley Generating Station	H&A FILE NO.	129420
LOCATION	Newburgh, Indian	PROJECT MGR.	Neal Kochis
CLIENT	Southern Indiana Gas and Electric Company	FIELD REP.	F. Reed
CONTRACTOR	N/A	SAMPLING DATE	05/30/25

Sampling Data:

Well ID:	WAP-7D	Well Depth as Built:	78.6 ft	Well Diameter:	2.0 in	Purging Device:	Bladder
Start time:	12:19	Well Depth Measured:	— ft	Initial Depth To Water:	34.60 ft	Field Parameter Device:	Horiba U-52
Finish Time:	12:55	Depth To Top Of Screen:	68.5 ft	Depth Of Pump Intake:	— ft	Tubing Present In Well:	☒ Yes ☐ No
		Depth To Bottom Of Scree	78.6 ft	Measuring Point:	Top of Casing (TOC)	Tubing Type:	Polyethylene

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (ms/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
Stabilized within →		[100 mL/min] to [500 mL/min]		-	NA	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
12:19	34.59	—	360	0.2	20.14	7.35	2.22	3.05	2.5	313	
12:24	34.58	—	360	2.0	19.56	7.37	2.24	1.11	5.0	268	Cond. = 2.24
12:29	34.57	—	360	3.8	19.73	7.40	2.24	0.60	6.3	219	
12:34	34.56	—	360	5.6	19.92	7.41	2.23	0.50	5.8	193	
12:39	34.58	—	360	7.4	19.89	7.42	2.22	0.45	5.3	175	
12:44	34.55	—	360	9.2	20.00	7.43	2.22	0.43	3.8	160	
12:49	34.55	—	360	11.0	19.74	7.44	2.21	0.42	3.0	147	
12:54	34.55	—	360	12.8	19.55	7.44	2.21	0.40	1.8	141	
											13.5L purged total
											Sample ID: WAP-7D-053025
											Sample Time: 12:55

well volume = 3.14 (PI) x radius² x height of water column. 2 in well = 0.163 gal/ft, 3 in = 0.367 gal/ft 4 in = 0.653 gal/ft, 6 in = 1.469 gal/ft, 1 cu. ft. = 7.48 gal, 1 gal = 3.785 L, 1L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

HALEY ALDRICH

PROJECT	F.B. Culley Generating Station - West Ash Pond	**H&A FILE NO.**	0129420
LOCATION	Newburgh, Indiana	**PROJECT MGR.**	Neal Kochis
CLIENT	Southern Indiana Gas and Electric Company	**FIELD REP.**	F. Reed
CONTRACTOR	Atlas	**SAMPLING DATE**	05/30/25

Sampling Data:		Well Depth as Built:	50.0 ft	Well Diameter:	2.0 in	Sampling Device:	Bladder Pump
Well ID:	WAP-8S	Well Depth Measured:	ft	Initial Depth To Water:	30.98 ft	Field Parameter Device:	Horiba U-52
Start time:	17:29	Depth To Top Of Screen:	40.0 ft	Depth Of Pump Intake:	ft	Tubing Present In Well:	☒ Yes ☐ No
Finish Time:	18:00	Depth To Bottom Of Scree	50.0 ft	Measuring Point:	Top of Casing (TOC)	Tubing Type:	Polyethylene

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (ms/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
Stabilized within →		[100 mL/min] to [500 mL/min]		-	NA	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
17:24	30.99	–	400	0.0	19.94	7.75	0.778	2.03	104	88	
17:29	30.99	–	400	2.0	19.91	7.82	0.812	0.47	31.3	-43	
17:34	30.99	–	400	4.0	19.94	7.86	0.830	0.23	7.1	-83	
17:39	31.00	–	400	6.0	20.01	7.89	0.830	0.20	4.6	-96	
17:44	30.99	–	400	8.0	19.98	7.91	0.832	0.20	11.4	-105	
17:49	30.99	–	400	10.0	20.05	7.92	0.833	0.20	0.0	-111	
17:54	31.00	–	400	12.0	20.03	7.93	0.834	0.22	0.0	-115	
17:59	31.00	–	400	14.0	20.00	7.94	0.830	0.21	0.0	-119	
											19.5L purged total

Sample ID:	WAP-8S-053025	**Date:**	05/30/25	**Time:**	18:00	**QAQC Samples:**	N/A

well volume = 3.14 (PI) x radius² x height of water column. 2 in well = 0.163 gal/ft, 3 in = 0.367 gal/ft 4 in = 0.653 gal/ft, 6 in = 1.469 gal/ft, 1 cu. ft. = 7.48 gal, 1 gal = 3.785 L, 1L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

HALEY ALDRICH

PROJECT	F.B. Culley Generating Station - West Ash Pond	**H&A FILE NO.**	0129420
LOCATION	Newburgh, Indiana	**PROJECT MGR.**	Neal Kochis
CLIENT	Southern Indiana Gas and Electric Company	**FIELD REP.**	F. Reed
CONTRACTOR	Atlas	**SAMPLING DATE**	05/30/25

Sampling Data:

Well ID:	WAP-8I	Well Depth as Built:	80.0 ft	Well Diameter:	2.0 in	Sampling Device:	Bladder Pump
Start time:	16:20	Well Depth Measured:	ft	Initial Depth To Water:	30.98 ft	Field Parameter Device:	Horiba U-52
Finish Time:	17:15	Depth To Top Of Screen:	70.0 ft	Depth Of Pump Intake:	ft	Tubing Present In Well:	☒ Yes ☐ No
		Depth To Bottom Of Scree	80.0 ft	Measuring Point:	Top of Casing (TOC)	Tubing Type:	Polyethylene

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (ms/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
Stabilized within →		[100 mL/min] to [500 mL/min]		-	NA	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
16:20	31.00	—	300	0.2	20.77	8.08	0.443	3.07	132	186	
16:25	31.00	—	300	1.5	20.79	8.00	0.430	0.78	48.2	154	
16:30	31.00	—	300	3.00	20.98	7.94	0.429	0.28	38.0	87	
16:35	31.00	—	300	4.5	21.20	7.92	0.430	0.24	10.5	56	
16:40	31.00	—	300	6.0	21.21	7.90	0.429	0.23	61.2	40	
16:45	31.00	—	300	7.5	21.13	7.88	0.431	0.23	7.1	21	
16:50	31.00	—	300	9.0	21.17	7.87	0.430	0.22	5.6	4	
16:55	31.00	—	300	10.5	21.21	7.86	0.430	0.22	4.4	-8	
17:00	31.00	—	300	12.0	21.26	7.86	0.430	0.20	3.1	-18	
17:05	31.00	—	300	14.5	21.08	7.86	0.429	0.21	1.8	-23	
17:10	31.00	—	300	16.0	21.22	7.89	0.430	0.20	3.4	-28	

Sample ID:	WAP-8I-053025	**Date:**	05/30/25	**Time:**	17:15	**QAQC Samples:**	N/A

well volume = 3.14 (PI) x radius² x height of water column. 2 in well = 0.163 gal/ft, 3 in = 0.367 gal/ft 4 in = 0.653 gal/ft, 6 in = 1.469 gal/ft, 1 cu. ft. = 7.48 gal, 1 gal = 3.785 L, 1L = 0.264 gal, 0.5L/min = 0.132 gal/min

APPENDIX C
Laboratory Analytical Reports

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11 12 13

ANALYTICAL REPORT

PREPARED FOR

Attn: Todd Plating
Haley & Aldrich, Inc.
400 Augusta Street
Suite 100
Greenville, South Carolina 29601

Generated 7/9/2024 6:57:56 PM

JOB DESCRIPTION

CCR Groundwater Monitoring FB Culley West
FB Culley West

JOB NUMBER

180-174967-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

myEOL

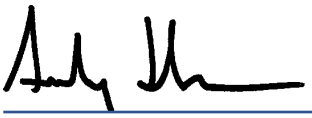
Job Notes

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



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Authorized for release by
Andy Johnson, Senior Project Manager
Andy.Johnson@et.eurofinsus.com
(615)818-9567

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Job ID: 180-174967-1 Eurofins Pittsburgh

Job Narrative
180-174967-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 6/4/2024 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 0.4°C, 0.6°C, 0.9°C, 2.6°C, 3.0°C and 3.5°C.

Receipt Exceptions
The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): WAP-5I (180-174967-7). The 500mL container for this sample has a sample ID of "WAP-4I" while the chain has "WAP-5I'. Logged per the COC.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): WAP-4S (180-174967-5). The container labels list a sample time of 1300 while the chain has 1400. Logged per the COC.

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

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

Job Narrative
180-174967-2

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 6/4/2024 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 0.4°C, 0.6°C, 0.9°C, 2.6°C, 3.0°C and 3.5°C.

Receipt Exceptions
The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): WAP-5I (180-174967-7). The 500mL container for this sample has a sample ID of "WAP-4I" while the chain has "WAP-5I'. Logged per the chain.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): WAP-4S (180-174967-5). The container labels list a sample time of 1300 while the chain has 1400. Logged per the chain.

HPLC/IC
Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: DUP-1 (180-174967-18), (180-174979-B-2), (180-174979-B-2 MS) and (180-174979-B-2 MSD). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: WAP-4S (180-174967-5), WAP-4S (180-174967-5[MS]), WAP-4S (180-174967-5[MSD]), WAP-5S (180-174967-6), WAP-8S (180-174967-12) and DUP-2 (180-174967-19). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: WAP-2RR (180-174967-2), WAP-3S (180-174967-3), WAP-3D (180-174967-4), WAP-7S (180-174967-10), WAP-7D (180-174967-11) and WAP-9S (180-174967-15). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following sample was diluted due to the nature of the sample matrix: WAP-1 (180-174967-1). Elevated reporting limits (RLs) are provided.

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.

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-24
California	State	2891	04-30-24 *
Connecticut	State	PH-0688	09-30-24
Florida	NELAP	E871008	06-30-24
Georgia	State	PA 02-00416	04-30-25
Illinois	NELAP	004375	07-31-25
Kansas	NELAP	E-10350	01-31-25
Kentucky (UST)	State	162013	04-30-23 *
Kentucky (WW)	State	KY98043	12-31-24
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-24
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-24
New Hampshire	NELAP	2030	04-04-24 *
New Jersey	NELAP	PA005	06-30-24
New York	NELAP	11182	04-01-25
North Carolina (WW/SW)	State	434	12-31-24
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-25
Pennsylvania	NELAP	02-00416	04-30-25
Rhode Island	State	LAO00362	01-01-25
South Carolina	State	89014	04-30-25
Texas	NELAP	T104704528	03-31-25
US Fish & Wildlife	US Federal Programs	058448	03-31-24 *
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462019-8	05-31-24 *
Virginia	NELAP	10043	07-14-24
West Virginia DEP	State	142	01-31-25
Wisconsin	State	998027800	08-31-24

Laboratory: Eurofins Cleveland

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	06-30-24
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-08-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-24
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
Connecticut	State	PH-0241	03-31-25
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-25
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-24
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-24
New Jersey	NELAP	MO002	06-30-25
New York	NELAP	11616	03-31-25
North Carolina (DW)	State	29700	07-31-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-25
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-24
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	10-31-24

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

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-174967-1	WAP-1	Water	06/03/24 11:30	06/04/24 10:00
180-174967-2	WAP-2RR	Water	05/30/24 14:20	06/04/24 10:00
180-174967-3	WAP-3S	Water	05/30/24 14:14	06/04/24 10:00
180-174967-4	WAP-3D	Water	05/30/24 12:40	06/04/24 10:00
180-174967-5	WAP-4S	Water	05/31/24 14:00	06/04/24 10:00
180-174967-6	WAP-5S	Water	05/31/24 14:30	06/04/24 10:00
180-174967-7	WAP-5I	Water	05/31/24 15:30	06/04/24 10:00
180-174967-8	WAP-5D	Water	05/31/24 16:45	06/04/24 10:00
180-174967-9	WAP-6S	Water	05/31/24 11:00	06/04/24 10:00
180-174967-10	WAP-7S	Water	05/30/24 12:10	06/04/24 10:00
180-174967-11	WAP-7D	Water	05/30/24 12:55	06/04/24 10:00
180-174967-12	WAP-8S	Water	05/31/24 13:50	06/04/24 10:00
180-174967-13	WAP-8I	Water	05/31/24 15:00	06/04/24 10:00
180-174967-14	WAP-8D	Water	06/03/24 11:00	06/04/24 10:00
180-174967-15	WAP-9S	Water	05/30/24 16:40	06/04/24 10:00
180-174967-16	WAP-9I	Water	05/30/24 15:45	06/04/24 10:00
180-174967-17	WAP-9D	Water	05/31/24 11:11	06/04/24 10:00
180-174967-18	DUP-1	Water	05/30/24 00:00	06/04/24 10:00
180-174967-19	DUP-2	Water	05/31/24 00:00	06/04/24 10:00
180-174967-20	FIELD BLANK 1	Water	05/31/24 14:25	06/04/24 10:00

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Client Sample ID: WAP-1

Date Collected: 06/03/24 11:30
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	471042	06/10/24 15:51	ERP	EET PIT
	Instrument ID: INTEGRION									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	471042	06/10/24 16:10	ERP	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 10:59	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:21	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:30	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			471491	06/13/24 14:29	ELS	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470709	06/05/24 16:31	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			751.19 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			668934	07/02/24 23:53	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			751.19 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668353	06/27/24 12:21	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-2RR

Date Collected: 05/30/24 14:20
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470861	06/08/24 03:39	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:03	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:24	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:33	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			471215	06/08/24 16:28	BAB	EET PIT
	Instrument ID: OZ									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Client Sample ID: WAP-2RR

Date Collected: 05/30/24 14:20
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
Total/NA	Prep	PrecSep-21			999.04 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			668934	07/02/24 23:53	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.04 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668353	06/27/24 12:21	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-3S

Date Collected: 05/30/24 14:14
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470861	06/08/24 03:09	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	470861	06/08/24 03:24	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:07	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:26	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:34	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470944	06/07/24 18:07	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			999.83 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			668934	07/02/24 23:53	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.83 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668353	06/27/24 12:21	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Client Sample ID: WAP-3D

Date Collected: 05/30/24 12:40
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470861	06/08/24 02:10	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	470861	06/08/24 02:25	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:12	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:34	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:35	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470944	06/07/24 18:47	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			996.60 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			668934	07/02/24 23:53	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			996.60 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668353	06/27/24 12:21	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-4S

Date Collected: 05/31/24 14:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470948	06/08/24 16:37	AM	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	470948	06/08/24 16:52	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 10:28	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:08	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470737	06/06/24 06:42	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470924	06/07/24 12:17	MTW	EET PIT
	Instrument ID: HGZ									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Client Sample ID: WAP-4S

Date Collected: 05/31/24 14:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9040C		1			470944	06/07/24 17:52	BAB	EET PIT
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			998.38 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			668934	07/02/24 23:53	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			998.38 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668353	06/27/24 12:21	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-5S

Date Collected: 05/31/24 14:30
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470948	06/08/24 16:08	AM	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	470948	06/08/24 16:22	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:16	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:37	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:37	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			471215	06/08/24 15:55	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			999.12 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			668934	07/02/24 23:53	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.12 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668353	06/27/24 12:22	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Client Sample ID: WAP-5I

Date Collected: 05/31/24 15:30
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470948	06/08/24 17:36	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:21	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:39	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:41	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470944	06/07/24 18:11	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1000.71 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			668936	07/02/24 23:44	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1000.71 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668353	06/27/24 12:22	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-5D

Date Collected: 05/31/24 16:45
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470948	06/08/24 18:21	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:34	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:42	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:42	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470909	06/07/24 07:57	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Job ID: 180-174967-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Client Sample ID: WAP-5D
Lab Sample ID: 180-174967-8
Date Collected: 05/31/24 16:45
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			998.07 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			668936	07/02/24 23:44	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			998.07 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668353	06/27/24 12:22	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-6S
Lab Sample ID: 180-174967-9
Date Collected: 05/31/24 11:00
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470948	06/08/24 18:35	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:38	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:44	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:43	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470909	06/07/24 07:52	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			997.51 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			668936	07/02/24 23:45	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			997.51 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668353	06/27/24 12:22	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-7S
Lab Sample ID: 180-174967-10
Date Collected: 05/30/24 12:10
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470861	06/08/24 02:40	ERP	EET PIT
	Instrument ID: CHICS2100B									

Client Sample ID: WAP-7S
Date Collected: 05/30/24 12:10
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	470861	06/08/24 02:55	ERP	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:43	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:47	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:44	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470944	06/07/24 18:16	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			997.61 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669426	07/05/24 06:56	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			997.61 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:14	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-7D
Date Collected: 05/30/24 12:55
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470861	06/08/24 01:11	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		10	1 mL	1 mL	470861	06/08/24 01:55	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:47	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:50	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:45	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470944	06/07/24 18:20	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Client Sample ID: WAP-7D

Date Collected: 05/30/24 12:55
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			997.56 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669425	07/05/24 06:46	SWS	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			997.56 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:15	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-8S

Date Collected: 05/31/24 13:50
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470948	06/08/24 20:19	AM	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	470948	06/08/24 20:34	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:52	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:52	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:46	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			471491	06/13/24 14:21	ELS	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			996.89 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669425	07/05/24 06:46	SWS	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			996.89 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:15	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Client Sample ID: WAP-8I

Date Collected: 05/31/24 15:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470948	06/08/24 18:50	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 11:56	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:55	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:47	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470909	06/07/24 07:48	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			998.88 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669425	07/05/24 06:46	SWS	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			998.88 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:15	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-8D

Date Collected: 06/03/24 11:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	471042	06/10/24 21:43	ERP	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 12:00	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 20:57	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:48	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470909	06/07/24 07:43	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470709	06/05/24 16:31	EBA	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Job ID: 180-174967-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Client Sample ID: WAP-8D
Lab Sample ID: 180-174967-14
Date Collected: 06/03/24 11:00
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.38 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669425	07/05/24 06:46	SWS	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			999.38 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:15	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-9S
Lab Sample ID: 180-174967-15
Date Collected: 05/30/24 16:40
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470861	06/08/24 06:07	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 12:05	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 21:05	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:50	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470944	06/07/24 18:25	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			999.81 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669426	07/05/24 08:51	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.81 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:15	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-9I
Lab Sample ID: 180-174967-16
Date Collected: 05/30/24 15:45
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470861	06/08/24 06:36	ERP	EET PIT
	Instrument ID: CHICS2100B									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Client Sample ID: WAP-9I

Date Collected: 05/30/24 15:45
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 12:09	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 21:08	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:51	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470944	06/07/24 18:29	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			996.79 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669426	07/05/24 08:51	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			996.79 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:15	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-9D

Date Collected: 05/31/24 11:11
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470948	06/08/24 19:05	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 12:14	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 21:10	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:54	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470909	06/07/24 07:39	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			997.09 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669426	07/05/24 08:51	SWS	EET SL
	Instrument ID: GFPCBLUE									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Job ID: 180-174967-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Client Sample ID: WAP-9D
Lab Sample ID: 180-174967-17
Date Collected: 05/31/24 11:11
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			997.09 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:15	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-1
Lab Sample ID: 180-174967-18
Date Collected: 05/30/24 00:00
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470770	06/06/24 20:26	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	470770	06/06/24 20:40	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 12:27	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 21:13	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:55	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470944	06/07/24 18:34	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			998.39 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669426	07/05/24 08:52	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			998.39 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:15	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-2
Lab Sample ID: 180-174967-19
Date Collected: 05/31/24 00:00
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470948	06/08/24 19:20	AM	EET PIT
	Instrument ID: CHICS2100B									

Client Sample ID: DUP-2

Lab Sample ID: 180-174967-19

Date Collected: 05/31/24 00:00
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	470948	06/08/24 19:35	AM	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 12:35	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 21:16	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:57	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			471491	06/13/24 14:27	ELS	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			999.32 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669426	07/05/24 08:52	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.32 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:15	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: FIELD BLANK 1

Lab Sample ID: 180-174967-20

Date Collected: 05/31/24 14:25
Matrix: Water
Date Received: 06/04/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470948	06/08/24 19:49	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			616128	06/10/24 12:40	KLC	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	615870	06/07/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			616088	06/10/24 21:18	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	470634	06/05/24 07:45	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470695	06/05/24 14:58	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470909	06/07/24 07:34	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470700	06/05/24 15:35	EBA	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174967-1
SDG: FB Culley West

Client Sample ID: FIELD BLANK 1

Date Collected: 05/31/24 14:25
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			997.02 mL	1.0 g	665363	06/10/24 08:55	MLT	EET SL
Total/NA	Analysis	9315		1			669426	07/05/24 08:52	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			997.02 mL	1.0 g	665441	06/10/24 08:59	MLT	EET SL
Total/NA	Analysis	9320		1			668352	06/27/24 12:15	SCB	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			669483	07/08/24 13:07	SCB	EET SL
	Instrument ID: NOEQUIP									

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET CLE
- Batch Type: Prep
  - BN = Benjamin Norman
- Batch Type: Analysis
  - AJC = Alexander Colosi
  - KLC = Karen Counts

Lab: EET PIT
- Batch Type: Prep
  - RJR = Ron Rosenbaum
- Batch Type: Analysis
  - AM = Adzuira Musule
  - BAB = Brooke Batyi
  - EBA = Elizabeth Arbster
  - ELS = Edwin Shireman
  - ERP = Evan Papak
  - MTW = Michael Wesoloski

Lab: EET SL
- Batch Type: Prep
  - MLT = Michaela Tiemeyer
- Batch Type: Analysis
  - SCB = Sarah Bernsen
  - SWS = Seth Stubblefield

Client Sample ID: WAP-1
Date Collected: 06/03/24 11:30
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-1
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	76		1.0	0.71	mg/L			06/10/24 15:51	1
Fluoride	0.27		0.10	0.026	mg/L			06/10/24 15:51	1
Sulfate	330		5.0	3.8	mg/L			06/10/24 16:10	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.061	J	0.10	0.057	mg/L		06/07/24 14:00	06/10/24 10:59	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00091	J	0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:21	1
Arsenic	0.0038	J	0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:21	1
Barium	0.44		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:21	1
Beryllium	0.00090	J	0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:21	1
Cadmium	0.00026	J	0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:21	1
Calcium	180		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:21	1
Chromium	0.010		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:21	1
Cobalt	0.0054		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:21	1
Lead	0.0080		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:21	1
Lithium	0.013		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:21	1
Molybdenum	0.0014	J	0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:21	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:21	1
Thallium	0.00029	J	0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:21	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	980		10	10	mg/L			06/05/24 16:31	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.2	HF	0.1	0.1	SU			06/13/24 14:29	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.573		0.176	0.184	1.00	0.150	pCi/L	06/10/24 08:55	07/02/24 23:53	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*30 - 110*	*06/10/24 08:55*	*07/02/24 23:53*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.720		0.445	0.450	1.00	0.641	pCi/L	06/10/24 08:59	06/27/24 12:21	1

Client Sample ID: WAP-1
Date Collected: 06/03/24 11:30
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-1
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*
Y Carrier	*79.6*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.29**		0.479	0.486	5.00	0.641	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-2RR

Date Collected: 05/30/24 14:20
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-2

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38**		1.0	0.71	mg/L			06/08/24 03:39	1
Fluoride	**0.33**		0.10	0.026	mg/L			06/08/24 03:39	1
Sulfate	**97**		1.0	0.76	mg/L			06/08/24 03:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.9**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:03	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:24	1
Arsenic	ND		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:24	1
Barium	**0.038**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:24	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:24	1
Cadmium	**0.00027**	**J**	0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:24	1
Calcium	**110**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:24	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:24	1
Cobalt	**0.0013**		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:24	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:24	1
Lithium	**0.021**		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:24	1
Molybdenum	**0.081**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:24	1
Selenium	**0.0071**		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:24	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:24	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**500**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**6.9**	**HF**	0.1	0.1	SU			06/08/24 16:28	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.00900	U	0.0594	0.0594	1.00	0.120	pCi/L	06/10/24 08:55	07/02/24 23:53	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*30 - 110*	*06/10/24 08:55*	*07/02/24 23:53*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.179	U	0.308	0.308	1.00	0.528	pCi/L	06/10/24 08:59	06/27/24 12:21	1

Client Sample ID: WAP-2RR
Date Collected: 05/30/24 14:20
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-2
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*
Y Carrier	*84.5*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.188	U	0.314	0.314	5.00	0.528	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-3S
Date Collected: 05/30/24 14:14
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-3
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**61**		1.0	0.71	mg/L			06/08/24 03:09	1
Fluoride	**0.42**		0.10	0.026	mg/L			06/08/24 03:09	1
Sulfate	**300**		5.0	3.8	mg/L			06/08/24 03:24	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**5.4**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:07	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:26	1
Arsenic	ND		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:26	1
Barium	**0.055**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:26	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:26	1
Cadmium	**0.00024**	**J**	0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:26	1
Calcium	**140**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:26	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:26	1
Cobalt	**0.0012**		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:26	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:26	1
Lithium	**0.11**		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:26	1
Molybdenum	**0.44**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:26	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:26	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:26	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**700**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.7**	**HF**	0.1	0.1	SU			06/07/24 18:07	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.413**		0.138	0.143	1.00	0.130	pCi/L	06/10/24 08:55	07/02/24 23:53	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.9*		*30 - 110*	*06/10/24 08:55*	*07/02/24 23:53*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.790**		0.405	0.412	1.00	0.561	pCi/L	06/10/24 08:59	06/27/24 12:21	1

Client Sample ID: WAP-3S
Date Collected: 05/30/24 14:14
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-3
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.9*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*
Y Carrier	*81.9*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.20**		0.428	0.436	5.00	0.561	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-3D

Date Collected: 05/30/24 12:40
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-4

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**56**		1.0	0.71	mg/L			06/08/24 02:10	1
Fluoride	**0.34**		0.10	0.026	mg/L			06/08/24 02:10	1
Sulfate	**340**		5.0	3.8	mg/L			06/08/24 02:25	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.8**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:12	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:34	1
Arsenic	ND		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:34	1
Barium	**0.019**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:34	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:34	1
Cadmium	**0.00023**	**J**	0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:34	1
Calcium	**150**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:34	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:34	1
Cobalt	**0.0010**		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:34	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:34	1
Lithium	**0.10**		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:34	1
Molybdenum	**0.29**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:34	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:34	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:34	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**780**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.7**	**HF**	0.1	0.1	SU			06/07/24 18:47	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0330	U	0.0833	0.0833	1.00	0.152	pCi/L	06/10/24 08:55	07/02/24 23:53	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*30 - 110*	*06/10/24 08:55*	*07/02/24 23:53*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.895**		0.385	0.394	1.00	0.504	pCi/L	06/10/24 08:59	06/27/24 12:21	1

Client Sample ID: WAP-3D
Date Collected: 05/30/24 12:40
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-4
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*
Y Carrier	*85.2*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.928**		0.394	0.403	5.00	0.504	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-4S
Date Collected: 05/31/24 14:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-5
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**110**		1.0	0.71	mg/L			06/08/24 16:37	1
Fluoride	**0.21**		0.10	0.026	mg/L			06/08/24 16:37	1
Sulfate	**430**		5.0	3.8	mg/L			06/08/24 16:52	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**14**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 10:28	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:08	1
Arsenic	**0.0052**		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:08	1
Barium	**0.054**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:08	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:08	1
Cadmium	**0.00034**	**J**	0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:08	1
Calcium	**270**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:08	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:08	1
Cobalt	**0.0018**		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:08	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:08	1
Lithium	**0.0026**	**J**	0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:08	1
Molybdenum	**0.49**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:08	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:08	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:08	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/06/24 06:42	06/07/24 12:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1100**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.3**	**HF**	0.1	0.1	SU			06/07/24 17:52	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.151**		0.0974	0.0984	1.00	0.133	pCi/L	06/10/24 08:55	07/02/24 23:53	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.3*		*30 - 110*	*06/10/24 08:55*	*07/02/24 23:53*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.284	U	0.367	0.368	1.00	0.612	pCi/L	06/10/24 08:59	06/27/24 12:21	1

Client Sample ID: WAP-4S
Date Collected: 05/31/24 14:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-5
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.3*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*
Y Carrier	*77.8*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.434	U	0.380	0.381	5.00	0.612	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-5S

Date Collected: 05/31/24 14:30
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-6

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**68**		1.0	0.71	mg/L			06/08/24 16:08	1
Fluoride	**0.10**		0.10	0.026	mg/L			06/08/24 16:08	1
Sulfate	**500**		5.0	3.8	mg/L			06/08/24 16:22	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**6.8**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:16	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:37	1
Arsenic	ND		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:37	1
Barium	**0.044**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:37	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:37	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:37	1
Calcium	**240**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:37	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:37	1
Cobalt	**0.0043**		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:37	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:37	1
Lithium	**0.0027**	**J**	0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:37	1
Molybdenum	ND		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:37	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:37	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:37	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1200**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**6.8**	**HF**	0.1	0.1	SU			06/08/24 15:55	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0348	U	0.0994	0.0995	1.00	0.181	pCi/L	06/10/24 08:55	07/02/24 23:53	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.9*		*30 - 110*	*06/10/24 08:55*	*07/02/24 23:53*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0887	U	0.332	0.332	1.00	0.597	pCi/L	06/10/24 08:59	06/27/24 12:22	1

Client Sample ID: WAP-5S
Date Collected: 05/31/24 14:30
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-6
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.9*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:22*	*1*
Y Carrier	*83.0*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:22*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.124	U	0.347	0.347	5.00	0.597	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-5I
Date Collected: 05/31/24 15:30
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-7
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20**		1.0	0.71	mg/L			06/08/24 17:36	1
Fluoride	**0.14**		0.10	0.026	mg/L			06/08/24 17:36	1
Sulfate	**42**		1.0	0.76	mg/L			06/08/24 17:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:21	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:39	1
Arsenic	**0.021**		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:39	1
Barium	**0.097**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:39	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:39	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:39	1
Calcium	**33**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:39	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:39	1
Cobalt	**0.00053**	**J**	0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:39	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:39	1
Lithium	**0.0028**	**J**	0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:39	1
Molybdenum	**0.0018**	**J**	0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:39	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:39	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:39	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**170**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			06/07/24 18:11	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.318**		0.128	0.131	1.00	0.148	pCi/L	06/10/24 08:55	07/02/24 23:44	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.4*		*30 - 110*	*06/10/24 08:55*	*07/02/24 23:44*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.761**		0.402	0.408	1.00	0.570	pCi/L	06/10/24 08:59	06/27/24 12:22	1

Client Sample ID: WAP-5I

Date Collected: 05/31/24 15:30
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-7

Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.4*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:22*	*1*
Y Carrier	*84.5*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:22*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.08**		0.422	0.429	5.00	0.570	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-5D

Date Collected: 05/31/24 16:45
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-8

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		1.0	0.71	mg/L			06/08/24 18:21	1
Fluoride	0.13		0.10	0.026	mg/L			06/08/24 18:21	1
Sulfate	37		1.0	0.76	mg/L			06/08/24 18:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.058	J	0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:34	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:42	1
Arsenic	0.011		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:42	1
Barium	0.22		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:42	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:42	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:42	1
Calcium	50		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:42	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:42	1
Cobalt	ND		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:42	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:42	1
Lithium	0.0022	J	0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:42	1
Molybdenum	0.0039	J	0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:42	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:42	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:42	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	200		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.4	HF	0.1	0.1	SU			06/07/24 07:57	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.394		0.136	0.141	1.00	0.141	pCi/L	06/10/24 08:55	07/02/24 23:44	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*30 - 110*	*06/10/24 08:55*	*07/02/24 23:44*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.576		0.336	0.340	1.00	0.472	pCi/L	06/10/24 08:59	06/27/24 12:22	1

Client Sample ID: WAP-5D
Date Collected: 05/31/24 16:45
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-8
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.9*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:22*	*1*
Y Carrier	*83.7*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:22*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.970**		0.362	0.368	5.00	0.472	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-6S

Date Collected: 05/31/24 11:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-9

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36**		1.0	0.71	mg/L			06/08/24 18:35	1
Fluoride	**0.42**		0.10	0.026	mg/L			06/08/24 18:35	1
Sulfate	**96**		1.0	0.76	mg/L			06/08/24 18:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.8**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:38	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:44	1
Arsenic	ND		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:44	1
Barium	**0.050**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:44	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:44	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:44	1
Calcium	**96**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:44	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:44	1
Cobalt	**0.00057**	**J**	0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:44	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:44	1
Lithium	**0.0042**	**J**	0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:44	1
Molybdenum	**0.13**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:44	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:44	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:44	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**440**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.3**	**HF**	0.1	0.1	SU			06/07/24 07:52	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0392	U	0.0867	0.0867	1.00	0.156	pCi/L	06/10/24 08:55	07/02/24 23:45	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.1*		*30 - 110*	*06/10/24 08:55*	*07/02/24 23:45*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.690**		0.447	0.451	1.00	0.669	pCi/L	06/10/24 08:59	06/27/24 12:22	1

Client Sample ID: WAP-6S
Date Collected: 05/31/24 11:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-9
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.1*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:22*	*1*
Y Carrier	*82.6*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:22*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.730**		0.455	0.459	5.00	0.669	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-7S

Date Collected: 05/30/24 12:10
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-10

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	84		1.0	0.71	mg/L			06/08/24 02:40	1
Fluoride	0.11		0.10	0.026	mg/L			06/08/24 02:40	1
Sulfate	440		5.0	3.8	mg/L			06/08/24 02:55	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	13		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:43	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	J	0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:47	1
Arsenic	0.0058		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:47	1
Barium	0.051		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:47	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:47	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:47	1
Calcium	190		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:47	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:47	1
Cobalt	ND		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:47	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:47	1
Lithium	0.20		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:47	1
Molybdenum	0.27		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:47	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:47	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:47	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	850		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	9.8	HF	0.1	0.1	SU			06/07/24 18:16	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.185		0.106	0.107	1.00	0.143	pCi/L	06/10/24 08:55	07/05/24 06:56	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.8*		*30 - 110*	*06/10/24 08:55*	*07/05/24 06:56*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.649		0.334	0.340	1.00	0.452	pCi/L	06/10/24 08:59	06/27/24 12:14	1

Client Sample ID: WAP-7S
Lab Sample ID: 180-174967-10
Date Collected: 05/30/24 12:10
Matrix: Water
Date Received: 06/04/24 10:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	90.8		30 - 110	06/10/24 08:59	06/27/24 12:14	1
Y Carrier	84.9		30 - 110	06/10/24 08:59	06/27/24 12:14	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.833		0.350	0.356	5.00	0.452	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-7D

Date Collected: 05/30/24 12:55
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-11

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**110**		1.0	0.71	mg/L			06/08/24 01:11	1
Fluoride	**0.31**		0.10	0.026	mg/L			06/08/24 01:11	1
Sulfate	**970**		10	7.6	mg/L			06/08/24 01:55	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**11**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:47	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:50	1
Arsenic	**0.00078**	**J**	0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:50	1
Barium	**0.028**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:50	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:50	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:50	1
Calcium	**350**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:50	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:50	1
Cobalt	**0.0031**		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:50	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:50	1
Lithium	**0.056**		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:50	1
Molybdenum	**0.19**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:50	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:50	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:50	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1700**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.3**	**HF**	0.1	0.1	SU			06/07/24 18:20	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.403**		0.140	0.145	1.00	0.138	pCi/L	06/10/24 08:55	07/05/24 06:46	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*69.3*		*30 - 110*	*06/10/24 08:55*	*07/05/24 06:46*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0668	U	0.402	0.402	1.00	0.735	pCi/L	06/10/24 08:59	06/27/24 12:15	1

Client Sample ID: WAP-7D
Date Collected: 05/30/24 12:55
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-11
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*69.3*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*
Y Carrier	*80.0*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.470	U	0.426	0.427	5.00	0.735	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-8S

Date Collected: 05/31/24 13:50
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-12

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**71**		1.0	0.71	mg/L			06/08/24 20:19	1
Fluoride	**0.16**		0.10	0.026	mg/L			06/08/24 20:19	1
Sulfate	**280**		5.0	3.8	mg/L			06/08/24 20:34	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.0**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:52	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:52	1
Arsenic	**0.016**		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:52	1
Barium	**0.13**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:52	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:52	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:52	1
Calcium	**140**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:52	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:52	1
Cobalt	**0.0017**		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:52	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:52	1
Lithium	**0.023**		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:52	1
Molybdenum	**0.19**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:52	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:52	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:52	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**720**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**	**HF**	0.1	0.1	SU			06/13/24 14:21	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.194**		0.102	0.103	1.00	0.125	pCi/L	06/10/24 08:55	07/05/24 06:46	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.7*		*30 - 110*	*06/10/24 08:55*	*07/05/24 06:46*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.51**		0.547	0.565	1.00	0.696	pCi/L	06/10/24 08:59	06/27/24 12:15	1

Client Sample ID: WAP-8S
Date Collected: 05/31/24 13:50
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-12
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*79.7*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*
Y Carrier	*79.6*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.71**		0.556	0.574	5.00	0.696	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-8I

Date Collected: 05/31/24 15:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-13

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26**		1.0	0.71	mg/L			06/08/24 18:50	1
Fluoride	**0.18**		0.10	0.026	mg/L			06/08/24 18:50	1
Sulfate	**56**		1.0	0.76	mg/L			06/08/24 18:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.088**	**J**	0.10	0.057	mg/L		06/07/24 14:00	06/10/24 11:56	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:55	1
Arsenic	**0.0031**	**J**	0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:55	1
Barium	**0.050**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:55	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:55	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:55	1
Calcium	**43**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:55	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:55	1
Cobalt	**0.00029**	**J**	0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:55	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:55	1
Lithium	**0.0038**	**J**	0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:55	1
Molybdenum	**0.021**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:55	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:55	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:55	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**240**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			06/07/24 07:48	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.142**		0.0905	0.0914	1.00	0.122	pCi/L	06/10/24 08:55	07/05/24 06:46	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.2*		*30 - 110*	*06/10/24 08:55*	*07/05/24 06:46*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.156	U	0.325	0.325	1.00	0.567	pCi/L	06/10/24 08:59	06/27/24 12:15	1

Client Sample ID: WAP-8I
Date Collected: 05/31/24 15:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-13
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.2*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*
Y Carrier	*85.6*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.298	U	0.337	0.338	5.00	0.567	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-8D

Date Collected: 06/03/24 11:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-14

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.6**		1.0	0.71	mg/L			06/10/24 21:43	1
Fluoride	**0.11**		0.10	0.026	mg/L			06/10/24 21:43	1
Sulfate	**48**		1.0	0.76	mg/L			06/10/24 21:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.078**	**J**	0.10	0.057	mg/L		06/07/24 14:00	06/10/24 12:00	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:57	1
Arsenic	**0.0032**	**J**	0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:57	1
Barium	**0.083**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:57	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:57	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:57	1
Calcium	**49**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:57	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:57	1
Cobalt	ND		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:57	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:57	1
Lithium	**0.0030**	**J**	0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:57	1
Molybdenum	**0.0013**	**J**	0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:57	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:57	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:57	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**240**		10	10	mg/L			06/05/24 16:31	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**	**HF**	0.1	0.1	SU			06/07/24 07:43	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.255**		0.109	0.111	1.00	0.121	pCi/L	06/10/24 08:55	07/05/24 06:46	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.7*		*30 - 110*	*06/10/24 08:55*	*07/05/24 06:46*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.287	U	0.325	0.326	1.00	0.532	pCi/L	06/10/24 08:59	06/27/24 12:15	1

Client Sample ID: WAP-8D
Date Collected: 06/03/24 11:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-14
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.7*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*
Y Carrier	*85.6*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.542**		0.343	0.344	5.00	0.532	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-9S

Date Collected: 05/30/24 16:40
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-15

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**31**		1.0	0.71	mg/L			06/08/24 06:07	1
Fluoride	**0.54**		0.10	0.026	mg/L			06/08/24 06:07	1
Sulfate	**90**		1.0	0.76	mg/L			06/08/24 06:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.3**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 12:05	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 21:05	1
Arsenic	ND		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 21:05	1
Barium	**0.13**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 21:05	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 21:05	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:05	1
Calcium	**86**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 21:05	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 21:05	1
Cobalt	**0.00070**	**J**	0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 21:05	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 21:05	1
Lithium	**0.0097**		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 21:05	1
Molybdenum	**0.11**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 21:05	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 21:05	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:05	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**410**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.6**	**HF**	0.1	0.1	SU			06/07/24 18:25	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.209**		0.101	0.103	1.00	0.118	pCi/L	06/10/24 08:55	07/05/24 08:51	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.9*		*30 - 110*	*06/10/24 08:55*	*07/05/24 08:51*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.435	U	0.352	0.355	1.00	0.544	pCi/L	06/10/24 08:59	06/27/24 12:15	1

Client Sample ID: WAP-9S
Date Collected: 05/30/24 16:40
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-15
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.9*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*
Y Carrier	*83.7*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.644**		0.366	0.370	5.00	0.544	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-9I
Date Collected: 05/30/24 15:45
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-16
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22**		1.0	0.71	mg/L			06/08/24 06:36	1
Fluoride	**0.15**		0.10	0.026	mg/L			06/08/24 06:36	1
Sulfate	**39**		1.0	0.76	mg/L			06/08/24 06:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.11**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 12:09	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 21:08	1
Arsenic	**0.0057**		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 21:08	1
Barium	**0.11**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 21:08	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 21:08	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:08	1
Calcium	**40**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 21:08	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 21:08	1
Cobalt	**0.00023**	**J**	0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 21:08	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 21:08	1
Lithium	**0.0042**	**J**	0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 21:08	1
Molybdenum	**0.0087**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 21:08	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 21:08	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:08	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**200**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.7**	**HF**	0.1	0.1	SU			06/07/24 18:29	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.106	U	0.0838	0.0843	1.00	0.123	pCi/L	06/10/24 08:55	07/05/24 08:51	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.3*		*30 - 110*	*06/10/24 08:55*	*07/05/24 08:51*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.550**		0.355	0.359	1.00	0.526	pCi/L	06/10/24 08:59	06/27/24 12:15	1

Client Sample ID: WAP-9I
Date Collected: 05/30/24 15:45
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-16
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.3*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*
Y Carrier	*84.5*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.656**		0.365	0.369	5.00	0.526	pCi/L		07/08/24 13:07	1

Client Sample ID: WAP-9D
Date Collected: 05/31/24 11:11
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-17
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22**		1.0	0.71	mg/L			06/08/24 19:05	1
Fluoride	**0.14**		0.10	0.026	mg/L			06/08/24 19:05	1
Sulfate	**42**		1.0	0.76	mg/L			06/08/24 19:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 12:14	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 21:10	1
Arsenic	**0.0051**		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 21:10	1
Barium	**0.18**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 21:10	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 21:10	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:10	1
Calcium	**40**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 21:10	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 21:10	1
Cobalt	ND		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 21:10	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 21:10	1
Lithium	**0.0037**	**J**	0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 21:10	1
Molybdenum	**0.0021**	**J**	0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 21:10	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 21:10	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:10	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**190**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			06/07/24 07:39	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.310**		0.123	0.126	1.00	0.137	pCi/L	06/10/24 08:55	07/05/24 08:51	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.9*		*30 - 110*	*06/10/24 08:55*	*07/05/24 08:51*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.286	U	0.344	0.345	1.00	0.567	pCi/L	06/10/24 08:59	06/27/24 12:15	1

Client Sample ID: WAP-9D
Date Collected: 05/31/24 11:11
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-17
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.9*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*
Y Carrier	*77.8*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.596**		0.365	0.367	5.00	0.567	pCi/L		07/08/24 13:07	1

Client Sample ID: DUP-1

Date Collected: 05/30/24 00:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-18

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**56**		1.0	0.71	mg/L			06/06/24 20:26	1
Fluoride	**0.33**		0.10	0.026	mg/L			06/06/24 20:26	1
Sulfate	**330**		5.0	3.8	mg/L			06/06/24 20:40	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.7**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 12:27	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 21:13	1
Arsenic	ND		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 21:13	1
Barium	**0.019**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 21:13	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 21:13	1
Cadmium	**0.00022**	**J**	0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:13	1
Calcium	**150**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 21:13	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 21:13	1
Cobalt	**0.0011**		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 21:13	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 21:13	1
Lithium	**0.099**		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 21:13	1
Molybdenum	**0.29**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 21:13	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 21:13	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:13	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**750**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.8**	**HF**	0.1	0.1	SU			06/07/24 18:34	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.312**		0.114	0.118	1.00	0.120	pCi/L	06/10/24 08:55	07/05/24 08:52	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.0*		*30 - 110*	*06/10/24 08:55*	*07/05/24 08:52*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.471	U	0.327	0.330	1.00	0.489	pCi/L	06/10/24 08:59	06/27/24 12:15	1

Client Sample ID: DUP-1
Date Collected: 05/30/24 00:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-18
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.0*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*
Y Carrier	*81.9*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.783**		0.346	0.350	5.00	0.489	pCi/L		07/08/24 13:07	1

Client Sample ID: DUP-2

Date Collected: 05/31/24 00:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-19

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**71**		1.0	0.71	mg/L			06/08/24 19:20	1
Fluoride	**0.17**		0.10	0.026	mg/L			06/08/24 19:20	1
Sulfate	**290**		5.0	3.8	mg/L			06/08/24 19:35	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.9**		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 12:35	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 21:16	1
Arsenic	**0.015**		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 21:16	1
Barium	**0.13**		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 21:16	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 21:16	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:16	1
Calcium	**140**		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 21:16	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 21:16	1
Cobalt	**0.0017**		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 21:16	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 21:16	1
Lithium	**0.024**		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 21:16	1
Molybdenum	**0.19**		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 21:16	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 21:16	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:16	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**730**		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.6**	**HF**	0.1	0.1	SU			06/13/24 14:27	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.124**		0.0861	0.0868	1.00	0.122	pCi/L	06/10/24 08:55	07/05/24 08:52	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.3*		*30 - 110*	*06/10/24 08:55*	*07/05/24 08:52*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.378	U	0.324	0.326	1.00	0.508	pCi/L	06/10/24 08:59	06/27/24 12:15	1

Client Sample ID: DUP-2
Date Collected: 05/31/24 00:00
Date Received: 06/04/24 10:00

Lab Sample ID: 180-174967-19
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.3*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*
Y Carrier	*83.0*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.502	U	0.335	0.337	5.00	0.508	pCi/L		07/08/24 13:07	1

Client Sample ID: FIELD BLANK 1
Lab Sample ID: 180-174967-20

Date Collected: 05/31/24 14:25
Matrix: Water
Date Received: 06/04/24 10:00

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			06/08/24 19:49	1
Fluoride	**0.026**	**J**	0.10	0.026	mg/L			06/08/24 19:49	1
Sulfate	ND		1.0	0.76	mg/L			06/08/24 19:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 12:40	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 21:18	1
Arsenic	ND		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 21:18	1
Barium	ND		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 21:18	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 21:18	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:18	1
Calcium	ND		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 21:18	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 21:18	1
Cobalt	ND		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 21:18	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 21:18	1
Lithium	ND		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 21:18	1
Molybdenum	ND		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 21:18	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 21:18	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 21:18	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	ND		10	10	mg/L			06/05/24 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**5.5**	**HF**	0.1	0.1	SU			06/07/24 07:34	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0996	U	0.0784	0.0789	1.00	0.112	pCi/L	06/10/24 08:55	07/05/24 08:52	1

Method: SW846 9315 - Radium-226 (GFPC)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.2*		*30 - 110*	*06/10/24 08:55*	*07/05/24 08:52*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.231	U	0.315	0.315	1.00	0.528	pCi/L	06/10/24 08:59	06/27/24 12:15	1

Client Sample ID: FIELD BLANK 1
Lab Sample ID: 180-174967-20

Date Collected: 05/31/24 14:25
Matrix: Water
Date Received: 06/04/24 10:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.2*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*
Y Carrier	*83.4*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:15*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.331	U	0.325	0.325	5.00	0.528	pCi/L		07/08/24 13:07	1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-470770/6
Matrix: Water
Analysis Batch: 470770

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			06/06/24 11:15	1
Fluoride	ND		0.10	0.026	mg/L			06/06/24 11:15	1
Sulfate	ND		1.0	0.76	mg/L			06/06/24 11:15	1

Lab Sample ID: LCS 180-470770/7
Matrix: Water
Analysis Batch: 470770

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.9		mg/L		102	80 - 120
Fluoride	2.50	2.46		mg/L		98	80 - 120
Sulfate	50.0	51.0		mg/L		102	80 - 120

Lab Sample ID: MB 180-470861/51
Matrix: Water
Analysis Batch: 470861

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			06/07/24 22:14	1
Fluoride	ND		0.10	0.026	mg/L			06/07/24 22:14	1
Sulfate	ND		1.0	0.76	mg/L			06/07/24 22:14	1

Lab Sample ID: LCS 180-470861/54
Matrix: Water
Analysis Batch: 470861

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	51.0		mg/L		102	80 - 120
Fluoride	2.50	2.47		mg/L		99	80 - 120
Sulfate	50.0	51.3		mg/L		103	80 - 120

Lab Sample ID: MB 180-470948/6
Matrix: Water
Analysis Batch: 470948

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			06/08/24 12:22	1
Fluoride	ND		0.10	0.026	mg/L			06/08/24 12:22	1
Sulfate	ND		1.0	0.76	mg/L			06/08/24 12:22	1

Lab Sample ID: LCS 180-470948/7
Matrix: Water
Analysis Batch: 470948

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.8		mg/L		102	80 - 120
Fluoride	2.50	2.50		mg/L		100	80 - 120
Sulfate	50.0	50.5		mg/L		101	80 - 120

Method: EPA 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 180-174967-5 MS
Matrix: Water
Analysis Batch: 470948

Client Sample ID: WAP-4S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	110		250	353		mg/L		98	80 - 120
Fluoride	0.21		12.5	12.6		mg/L		99	80 - 120
Sulfate	410	E	250	658		mg/L		99	80 - 120

Lab Sample ID: 180-174967-5 MSD
Matrix: Water
Analysis Batch: 470948

Client Sample ID: WAP-4S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	110		250	356		mg/L		99	80 - 120	1	15
Fluoride	0.21		12.5	12.4		mg/L		97	80 - 120	1	15
Sulfate	410	E	250	661		mg/L		100	80 - 120	0	15

Lab Sample ID: MB 180-471042/6
Matrix: Water
Analysis Batch: 471042

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			06/10/24 11:54	1
Fluoride	ND		0.10	0.026	mg/L			06/10/24 11:54	1
Sulfate	ND		1.0	0.76	mg/L			06/10/24 11:54	1

Lab Sample ID: LCS 180-471042/7
Matrix: Water
Analysis Batch: 471042

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.0		mg/L		100	80 - 120
Fluoride	2.50	2.53		mg/L		101	80 - 120
Sulfate	50.0	49.7		mg/L		99	80 - 120

Method: EPA 6010D - Metals (ICP)

Lab Sample ID: MB 240-615870/1-A
Matrix: Water
Analysis Batch: 616128

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 615870

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		06/07/24 14:00	06/10/24 10:20	1

Lab Sample ID: LCS 240-615870/2-A
Matrix: Water
Analysis Batch: 616128

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 615870

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	1.02		mg/L		102	80 - 120

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

Lab Sample ID: 180-174967-5 MS
Matrix: Water
Analysis Batch: 616128

Client Sample ID: WAP-4S
Prep Type: Total Recoverable
Prep Batch: 615870

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	14		1.00	14.6	4	mg/L		108	75 - 125

Lab Sample ID: 180-174967-5 MSD
Matrix: Water
Analysis Batch: 616128

Client Sample ID: WAP-4S
Prep Type: Total Recoverable
Prep Batch: 615870

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	14		1.00	14.4	4	mg/L		84	75 - 125	2	20

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-615870/1-A
Matrix: Water
Analysis Batch: 616088

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 615870

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/07/24 14:00	06/10/24 20:03	1
Arsenic	ND		0.0050	0.00075	mg/L		06/07/24 14:00	06/10/24 20:03	1
Barium	ND		0.0050	0.0022	mg/L		06/07/24 14:00	06/10/24 20:03	1
Beryllium	ND		0.0010	0.00062	mg/L		06/07/24 14:00	06/10/24 20:03	1
Cadmium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:03	1
Calcium	ND		1.0	0.25	mg/L		06/07/24 14:00	06/10/24 20:03	1
Chromium	ND		0.0050	0.0012	mg/L		06/07/24 14:00	06/10/24 20:03	1
Cobalt	ND		0.0010	0.00019	mg/L		06/07/24 14:00	06/10/24 20:03	1
Lead	ND		0.0010	0.00045	mg/L		06/07/24 14:00	06/10/24 20:03	1
Lithium	ND		0.0080	0.0017	mg/L		06/07/24 14:00	06/10/24 20:03	1
Molybdenum	ND		0.0050	0.0011	mg/L		06/07/24 14:00	06/10/24 20:03	1
Selenium	ND		0.0050	0.00089	mg/L		06/07/24 14:00	06/10/24 20:03	1
Thallium	ND		0.0010	0.00020	mg/L		06/07/24 14:00	06/10/24 20:03	1

Lab Sample ID: LCS 240-615870/3-A
Matrix: Water
Analysis Batch: 616088

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 615870

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.100	0.0917		mg/L		92	80 - 120
Arsenic	1.00	0.885		mg/L		88	80 - 120
Barium	1.00	0.921		mg/L		92	80 - 120
Beryllium	0.500	0.440		mg/L		88	80 - 120
Cadmium	0.500	0.466		mg/L		93	80 - 120
Calcium	25.0	23.4		mg/L		94	80 - 120
Chromium	0.500	0.479		mg/L		96	80 - 120
Cobalt	0.500	0.448		mg/L		90	80 - 120
Lead	0.500	0.462		mg/L		92	80 - 120
Lithium	0.500	0.486		mg/L		97	80 - 120
Molybdenum	0.500	0.457		mg/L		91	80 - 120
Selenium	1.00	0.875		mg/L		88	80 - 120
Thallium	1.00	0.928		mg/L		93	80 - 120

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-174967-5 MS
Matrix: Water
Analysis Batch: 616088

Client Sample ID: WAP-4S
Prep Type: Total Recoverable
Prep Batch: 615870

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		0.100	0.101		mg/L		101	80 - 120
Arsenic	0.0052		1.00	0.983		mg/L		98	80 - 120
Barium	0.054		1.00	1.05		mg/L		100	80 - 120
Beryllium	ND		0.500	0.462		mg/L		92	80 - 120
Cadmium	0.00034	J	0.500	0.495		mg/L		99	80 - 120
Calcium	270		25.0	293	4	mg/L		110	80 - 120
Chromium	ND		0.500	0.511		mg/L		102	80 - 120
Cobalt	0.0018		0.500	0.480		mg/L		96	80 - 120
Lead	ND		0.500	0.488		mg/L		98	80 - 120
Lithium	0.0026	J	0.500	0.518		mg/L		103	80 - 120
Molybdenum	0.49		0.500	1.00		mg/L		103	80 - 120
Selenium	ND		1.00	0.934		mg/L		93	80 - 120
Thallium	ND		1.00	0.984		mg/L		98	80 - 120

Lab Sample ID: 180-174967-5 MSD
Matrix: Water
Analysis Batch: 616088

Client Sample ID: WAP-4S
Prep Type: Total Recoverable
Prep Batch: 615870

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		0.100	0.0988		mg/L		99	80 - 120	2	20
Arsenic	0.0052		1.00	0.964		mg/L		96	80 - 120	2	20
Barium	0.054		1.00	1.03		mg/L		98	80 - 120	2	20
Beryllium	ND		0.500	0.456		mg/L		91	80 - 120	1	20
Cadmium	0.00034	J	0.500	0.490		mg/L		98	80 - 120	1	20
Calcium	270		25.0	290	4	mg/L		96	80 - 120	1	20
Chromium	ND		0.500	0.503		mg/L		101	80 - 120	2	20
Cobalt	0.0018		0.500	0.467		mg/L		93	80 - 120	3	20
Lead	ND		0.500	0.487		mg/L		97	80 - 120	0	20
Lithium	0.0026	J	0.500	0.506		mg/L		101	80 - 120	2	20
Molybdenum	0.49		0.500	0.982		mg/L		98	80 - 120	2	20
Selenium	ND		1.00	0.910		mg/L		91	80 - 120	3	20
Thallium	ND		1.00	0.975		mg/L		97	80 - 120	1	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-470634/1-A
Matrix: Water
Analysis Batch: 470695

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 470634

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/24 07:45	06/05/24 14:28	1

Lab Sample ID: LCS 180-470634/2-A
Matrix: Water
Analysis Batch: 470695

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 470634

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00250	0.00255		mg/L		102	80 - 120

Method: EPA 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 180-174967-1 MS
Matrix: Water
Analysis Batch: 470695

Client Sample ID: WAP-1
Prep Type: Total/NA
Prep Batch: 470634

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		0.00100	0.00108		mg/L		108	75 - 125

Lab Sample ID: 180-174967-1 MSD
Matrix: Water
Analysis Batch: 470695

Client Sample ID: WAP-1
Prep Type: Total/NA
Prep Batch: 470634

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.00110		mg/L		110	75 - 125	2	20

Lab Sample ID: MB 180-470737/1-A
Matrix: Water
Analysis Batch: 470924

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 470737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/06/24 06:41	06/07/24 12:15	1

Lab Sample ID: LCS 180-470737/2-A
Matrix: Water
Analysis Batch: 470924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 470737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00250	0.00247		mg/L		99	80 - 120

Lab Sample ID: 180-174967-5 MS
Matrix: Water
Analysis Batch: 470924

Client Sample ID: WAP-4S
Prep Type: Total/NA
Prep Batch: 470737

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		0.00100	0.00102		mg/L		102	75 - 125

Lab Sample ID: 180-174967-5 MSD
Matrix: Water
Analysis Batch: 470924

Client Sample ID: WAP-4S
Prep Type: Total/NA
Prep Batch: 470737

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.00101		mg/L		101	75 - 125	1	20

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-470909/1
Matrix: Water
Analysis Batch: 470909

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Method: EPA 9040C - pH (Continued)

Lab Sample ID: LCS 180-470944/1
Matrix: Water
Analysis Batch: 470944

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-470944/24
Matrix: Water
Analysis Batch: 470944

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 180-174967-4 DU
Matrix: Water
Analysis Batch: 470944

Client Sample ID: WAP-3D
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.7	HF	7.7		SU		0	2

Lab Sample ID: LCS 180-471215/1
Matrix: Water
Analysis Batch: 471215

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-471491/1
Matrix: Water
Analysis Batch: 471491

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 180-174967-12 DU
Matrix: Water
Analysis Batch: 471491

Client Sample ID: WAP-8S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.4	HF	7.4		SU		0.3	2

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

Lab Sample ID: MB 180-470700/1
Matrix: Water
Analysis Batch: 470700

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		10	10	mg/L			06/05/24 15:35	1

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

Lab Sample ID: LCS 180-470700/2
Matrix: Water
Analysis Batch: 470700

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			417	376		mg/L		90	85 - 115		

Lab Sample ID: 180-174967-18 DU
Matrix: Water
Analysis Batch: 470700

Client Sample ID: DUP-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	750			752		mg/L				0.1	10

Lab Sample ID: MB 180-470709/1
Matrix: Water
Analysis Batch: 470709

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		10	10	mg/L			06/05/24 16:31	1

Lab Sample ID: LCS 180-470709/2
Matrix: Water
Analysis Batch: 470709

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			417	394		mg/L		94	85 - 115		

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-665363/1-A
Matrix: Water
Analysis Batch: 668934

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 665363

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01210	U	0.0484	0.0484	1.00	0.112	pCi/L	06/10/24 08:55	07/02/24 23:53	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*30 - 110*	*06/10/24 08:55*	*07/02/24 23:53*	*1*

Lab Sample ID: LCS 160-665363/2-A
Matrix: Water
Analysis Batch: 668934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 665363

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.87		1.16	1.00	0.120	pCi/L	96	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.6*		*30 - 110*

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 180-174967-5 DU
Matrix: Water
Analysis Batch: 668934

Client Sample ID: WAP-4S
Prep Type: Total/NA
Prep Batch: 665363

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.151			0.1614	U	0.116	1.00	0.169	pCi/L			0.05	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*86.1*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-665441/1-A
Matrix: Water
Analysis Batch: 668353

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 665441

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2306	U	0.317	0.318	1.00	0.532	pCi/L	06/10/24 08:59	06/27/24 12:21	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*
Y Carrier	*89.3*		*30 - 110*	*06/10/24 08:59*	*06/27/24 12:21*	*1*

Lab Sample ID: LCS 160-665441/2-A
Matrix: Water
Analysis Batch: 668353

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 665441

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.81	8.115		1.14	1.00	0.487	pCi/L	92	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.6*		*30 - 110*
Y Carrier	*85.6*		*30 - 110*

Lab Sample ID: 180-174967-5 DU
Matrix: Water
Analysis Batch: 668353

Client Sample ID: WAP-4S
Prep Type: Total/NA
Prep Batch: 665441

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.284	U		0.6204		0.369	1.00	0.514	pCi/L			0.46	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*86.1*		*30 - 110*
Y Carrier	*84.1*		*30 - 110*

HPLC/IC

Analysis Batch: 470770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-18	DUP-1	Total/NA	Water	EPA 9056A	
180-174967-18	DUP-1	Total/NA	Water	EPA 9056A	
MB 180-470770/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-470770/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 470861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-2	WAP-2RR	Total/NA	Water	EPA 9056A	
180-174967-3	WAP-3S	Total/NA	Water	EPA 9056A	
180-174967-3	WAP-3S	Total/NA	Water	EPA 9056A	
180-174967-4	WAP-3D	Total/NA	Water	EPA 9056A	
180-174967-4	WAP-3D	Total/NA	Water	EPA 9056A	
180-174967-10	WAP-7S	Total/NA	Water	EPA 9056A	
180-174967-10	WAP-7S	Total/NA	Water	EPA 9056A	
180-174967-11	WAP-7D	Total/NA	Water	EPA 9056A	
180-174967-11	WAP-7D	Total/NA	Water	EPA 9056A	
180-174967-15	WAP-9S	Total/NA	Water	EPA 9056A	
180-174967-16	WAP-9I	Total/NA	Water	EPA 9056A	
MB 180-470861/51	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-470861/54	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 470948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-5	WAP-4S	Total/NA	Water	EPA 9056A	
180-174967-5	WAP-4S	Total/NA	Water	EPA 9056A	
180-174967-6	WAP-5S	Total/NA	Water	EPA 9056A	
180-174967-6	WAP-5S	Total/NA	Water	EPA 9056A	
180-174967-7	WAP-5I	Total/NA	Water	EPA 9056A	
180-174967-8	WAP-5D	Total/NA	Water	EPA 9056A	
180-174967-9	WAP-6S	Total/NA	Water	EPA 9056A	
180-174967-12	WAP-8S	Total/NA	Water	EPA 9056A	
180-174967-12	WAP-8S	Total/NA	Water	EPA 9056A	
180-174967-13	WAP-8I	Total/NA	Water	EPA 9056A	
180-174967-17	WAP-9D	Total/NA	Water	EPA 9056A	
180-174967-19	DUP-2	Total/NA	Water	EPA 9056A	
180-174967-19	DUP-2	Total/NA	Water	EPA 9056A	
180-174967-20	FIELD BLANK 1	Total/NA	Water	EPA 9056A	
MB 180-470948/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-470948/7	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-174967-5 MS	WAP-4S	Total/NA	Water	EPA 9056A	
180-174967-5 MSD	WAP-4S	Total/NA	Water	EPA 9056A	

Analysis Batch: 471042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-1	WAP-1	Total/NA	Water	EPA 9056A	
180-174967-1	WAP-1	Total/NA	Water	EPA 9056A	
180-174967-14	WAP-8D	Total/NA	Water	EPA 9056A	
MB 180-471042/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-471042/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 470634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-1	WAP-1	Total/NA	Water	7470A	
180-174967-2	WAP-2RR	Total/NA	Water	7470A	
180-174967-3	WAP-3S	Total/NA	Water	7470A	
180-174967-4	WAP-3D	Total/NA	Water	7470A	
180-174967-6	WAP-5S	Total/NA	Water	7470A	
180-174967-7	WAP-5I	Total/NA	Water	7470A	
180-174967-8	WAP-5D	Total/NA	Water	7470A	
180-174967-9	WAP-6S	Total/NA	Water	7470A	
180-174967-10	WAP-7S	Total/NA	Water	7470A	
180-174967-11	WAP-7D	Total/NA	Water	7470A	
180-174967-12	WAP-8S	Total/NA	Water	7470A	
180-174967-13	WAP-8I	Total/NA	Water	7470A	
180-174967-14	WAP-8D	Total/NA	Water	7470A	
180-174967-15	WAP-9S	Total/NA	Water	7470A	
180-174967-16	WAP-9I	Total/NA	Water	7470A	
180-174967-17	WAP-9D	Total/NA	Water	7470A	
180-174967-18	DUP-1	Total/NA	Water	7470A	
180-174967-19	DUP-2	Total/NA	Water	7470A	
180-174967-20	FIELD BLANK 1	Total/NA	Water	7470A	
MB 180-470634/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-470634/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-174967-1 MS	WAP-1	Total/NA	Water	7470A	
180-174967-1 MSD	WAP-1	Total/NA	Water	7470A	

Analysis Batch: 470695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-1	WAP-1	Total/NA	Water	EPA 7470A	470634
180-174967-2	WAP-2RR	Total/NA	Water	EPA 7470A	470634
180-174967-3	WAP-3S	Total/NA	Water	EPA 7470A	470634
180-174967-4	WAP-3D	Total/NA	Water	EPA 7470A	470634
180-174967-6	WAP-5S	Total/NA	Water	EPA 7470A	470634
180-174967-7	WAP-5I	Total/NA	Water	EPA 7470A	470634
180-174967-8	WAP-5D	Total/NA	Water	EPA 7470A	470634
180-174967-9	WAP-6S	Total/NA	Water	EPA 7470A	470634
180-174967-10	WAP-7S	Total/NA	Water	EPA 7470A	470634
180-174967-11	WAP-7D	Total/NA	Water	EPA 7470A	470634
180-174967-12	WAP-8S	Total/NA	Water	EPA 7470A	470634
180-174967-13	WAP-8I	Total/NA	Water	EPA 7470A	470634
180-174967-14	WAP-8D	Total/NA	Water	EPA 7470A	470634
180-174967-15	WAP-9S	Total/NA	Water	EPA 7470A	470634
180-174967-16	WAP-9I	Total/NA	Water	EPA 7470A	470634
180-174967-17	WAP-9D	Total/NA	Water	EPA 7470A	470634
180-174967-18	DUP-1	Total/NA	Water	EPA 7470A	470634
180-174967-19	DUP-2	Total/NA	Water	EPA 7470A	470634
180-174967-20	FIELD BLANK 1	Total/NA	Water	EPA 7470A	470634
MB 180-470634/1-A	Method Blank	Total/NA	Water	EPA 7470A	470634
LCS 180-470634/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	470634
180-174967-1 MS	WAP-1	Total/NA	Water	EPA 7470A	470634
180-174967-1 MSD	WAP-1	Total/NA	Water	EPA 7470A	470634

Metals

Prep Batch: 470737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-5	WAP-4S	Total/NA	Water	7470A	
MB 180-470737/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-470737/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-174967-5 MS	WAP-4S	Total/NA	Water	7470A	
180-174967-5 MSD	WAP-4S	Total/NA	Water	7470A	

Analysis Batch: 470924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-5	WAP-4S	Total/NA	Water	EPA 7470A	470737
MB 180-470737/1-A	Method Blank	Total/NA	Water	EPA 7470A	470737
LCS 180-470737/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	470737
180-174967-5 MS	WAP-4S	Total/NA	Water	EPA 7470A	470737
180-174967-5 MSD	WAP-4S	Total/NA	Water	EPA 7470A	470737

Prep Batch: 615870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-1	WAP-1	Total Recoverable	Water	3005A	
180-174967-2	WAP-2RR	Total Recoverable	Water	3005A	
180-174967-3	WAP-3S	Total Recoverable	Water	3005A	
180-174967-4	WAP-3D	Total Recoverable	Water	3005A	
180-174967-5	WAP-4S	Total Recoverable	Water	3005A	
180-174967-6	WAP-5S	Total Recoverable	Water	3005A	
180-174967-7	WAP-5I	Total Recoverable	Water	3005A	
180-174967-8	WAP-5D	Total Recoverable	Water	3005A	
180-174967-9	WAP-6S	Total Recoverable	Water	3005A	
180-174967-10	WAP-7S	Total Recoverable	Water	3005A	
180-174967-11	WAP-7D	Total Recoverable	Water	3005A	
180-174967-12	WAP-8S	Total Recoverable	Water	3005A	
180-174967-13	WAP-8I	Total Recoverable	Water	3005A	
180-174967-14	WAP-8D	Total Recoverable	Water	3005A	
180-174967-15	WAP-9S	Total Recoverable	Water	3005A	
180-174967-16	WAP-9I	Total Recoverable	Water	3005A	
180-174967-17	WAP-9D	Total Recoverable	Water	3005A	
180-174967-18	DUP-1	Total Recoverable	Water	3005A	
180-174967-19	DUP-2	Total Recoverable	Water	3005A	
180-174967-20	FIELD BLANK 1	Total Recoverable	Water	3005A	
MB 240-615870/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-615870/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-615870/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-174967-5 MS	WAP-4S	Total Recoverable	Water	3005A	
180-174967-5 MS	WAP-4S	Total Recoverable	Water	3005A	
180-174967-5 MSD	WAP-4S	Total Recoverable	Water	3005A	
180-174967-5 MSD	WAP-4S	Total Recoverable	Water	3005A	

Analysis Batch: 616088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-1	WAP-1	Total Recoverable	Water	EPA 6020B	615870
180-174967-2	WAP-2RR	Total Recoverable	Water	EPA 6020B	615870
180-174967-3	WAP-3S	Total Recoverable	Water	EPA 6020B	615870
180-174967-4	WAP-3D	Total Recoverable	Water	EPA 6020B	615870
180-174967-5	WAP-4S	Total Recoverable	Water	EPA 6020B	615870

Metals (Continued)

Analysis Batch: 616088 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-6	WAP-5S	Total Recoverable	Water	EPA 6020B	615870
180-174967-7	WAP-5I	Total Recoverable	Water	EPA 6020B	615870
180-174967-8	WAP-5D	Total Recoverable	Water	EPA 6020B	615870
180-174967-9	WAP-6S	Total Recoverable	Water	EPA 6020B	615870
180-174967-10	WAP-7S	Total Recoverable	Water	EPA 6020B	615870
180-174967-11	WAP-7D	Total Recoverable	Water	EPA 6020B	615870
180-174967-12	WAP-8S	Total Recoverable	Water	EPA 6020B	615870
180-174967-13	WAP-8I	Total Recoverable	Water	EPA 6020B	615870
180-174967-14	WAP-8D	Total Recoverable	Water	EPA 6020B	615870
180-174967-15	WAP-9S	Total Recoverable	Water	EPA 6020B	615870
180-174967-16	WAP-9I	Total Recoverable	Water	EPA 6020B	615870
180-174967-17	WAP-9D	Total Recoverable	Water	EPA 6020B	615870
180-174967-18	DUP-1	Total Recoverable	Water	EPA 6020B	615870
180-174967-19	DUP-2	Total Recoverable	Water	EPA 6020B	615870
180-174967-20	FIELD BLANK 1	Total Recoverable	Water	EPA 6020B	615870
MB 240-615870/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	615870
LCS 240-615870/3-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	615870
180-174967-5 MS	WAP-4S	Total Recoverable	Water	EPA 6020B	615870
180-174967-5 MSD	WAP-4S	Total Recoverable	Water	EPA 6020B	615870

Analysis Batch: 616128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-1	WAP-1	Total Recoverable	Water	EPA 6010D	615870
180-174967-2	WAP-2RR	Total Recoverable	Water	EPA 6010D	615870
180-174967-3	WAP-3S	Total Recoverable	Water	EPA 6010D	615870
180-174967-4	WAP-3D	Total Recoverable	Water	EPA 6010D	615870
180-174967-5	WAP-4S	Total Recoverable	Water	EPA 6010D	615870
180-174967-6	WAP-5S	Total Recoverable	Water	EPA 6010D	615870
180-174967-7	WAP-5I	Total Recoverable	Water	EPA 6010D	615870
180-174967-8	WAP-5D	Total Recoverable	Water	EPA 6010D	615870
180-174967-9	WAP-6S	Total Recoverable	Water	EPA 6010D	615870
180-174967-10	WAP-7S	Total Recoverable	Water	EPA 6010D	615870
180-174967-11	WAP-7D	Total Recoverable	Water	EPA 6010D	615870
180-174967-12	WAP-8S	Total Recoverable	Water	EPA 6010D	615870
180-174967-13	WAP-8I	Total Recoverable	Water	EPA 6010D	615870
180-174967-14	WAP-8D	Total Recoverable	Water	EPA 6010D	615870
180-174967-15	WAP-9S	Total Recoverable	Water	EPA 6010D	615870
180-174967-16	WAP-9I	Total Recoverable	Water	EPA 6010D	615870
180-174967-17	WAP-9D	Total Recoverable	Water	EPA 6010D	615870
180-174967-18	DUP-1	Total Recoverable	Water	EPA 6010D	615870
180-174967-19	DUP-2	Total Recoverable	Water	EPA 6010D	615870
180-174967-20	FIELD BLANK 1	Total Recoverable	Water	EPA 6010D	615870
MB 240-615870/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	615870
LCS 240-615870/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	615870
180-174967-5 MS	WAP-4S	Total Recoverable	Water	EPA 6010D	615870
180-174967-5 MSD	WAP-4S	Total Recoverable	Water	EPA 6010D	615870

General Chemistry

Analysis Batch: 470700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-2	WAP-2RR	Total/NA	Water	SM 2540C	
180-174967-3	WAP-3S	Total/NA	Water	SM 2540C	
180-174967-4	WAP-3D	Total/NA	Water	SM 2540C	
180-174967-5	WAP-4S	Total/NA	Water	SM 2540C	
180-174967-6	WAP-5S	Total/NA	Water	SM 2540C	
180-174967-7	WAP-5I	Total/NA	Water	SM 2540C	
180-174967-8	WAP-5D	Total/NA	Water	SM 2540C	
180-174967-9	WAP-6S	Total/NA	Water	SM 2540C	
180-174967-10	WAP-7S	Total/NA	Water	SM 2540C	
180-174967-11	WAP-7D	Total/NA	Water	SM 2540C	
180-174967-12	WAP-8S	Total/NA	Water	SM 2540C	
180-174967-13	WAP-8I	Total/NA	Water	SM 2540C	
180-174967-15	WAP-9S	Total/NA	Water	SM 2540C	
180-174967-16	WAP-9I	Total/NA	Water	SM 2540C	
180-174967-17	WAP-9D	Total/NA	Water	SM 2540C	
180-174967-18	DUP-1	Total/NA	Water	SM 2540C	
180-174967-19	DUP-2	Total/NA	Water	SM 2540C	
180-174967-20	FIELD BLANK 1	Total/NA	Water	SM 2540C	
MB 180-470700/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-470700/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-174967-18 DU	DUP-1	Total/NA	Water	SM 2540C	

Analysis Batch: 470709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-1	WAP-1	Total/NA	Water	SM 2540C	
180-174967-14	WAP-8D	Total/NA	Water	SM 2540C	
MB 180-470709/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-470709/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 470909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-8	WAP-5D	Total/NA	Water	EPA 9040C	
180-174967-9	WAP-6S	Total/NA	Water	EPA 9040C	
180-174967-13	WAP-8I	Total/NA	Water	EPA 9040C	
180-174967-14	WAP-8D	Total/NA	Water	EPA 9040C	
180-174967-17	WAP-9D	Total/NA	Water	EPA 9040C	
180-174967-20	FIELD BLANK 1	Total/NA	Water	EPA 9040C	
LCS 180-470909/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 470944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-3	WAP-3S	Total/NA	Water	EPA 9040C	
180-174967-4	WAP-3D	Total/NA	Water	EPA 9040C	
180-174967-5	WAP-4S	Total/NA	Water	EPA 9040C	
180-174967-7	WAP-5I	Total/NA	Water	EPA 9040C	
180-174967-10	WAP-7S	Total/NA	Water	EPA 9040C	
180-174967-11	WAP-7D	Total/NA	Water	EPA 9040C	
180-174967-15	WAP-9S	Total/NA	Water	EPA 9040C	
180-174967-16	WAP-9I	Total/NA	Water	EPA 9040C	
180-174967-18	DUP-1	Total/NA	Water	EPA 9040C	
LCS 180-470944/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

General Chemistry (Continued)

Analysis Batch: 470944 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-470944/24	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-174967-4 DU	WAP-3D	Total/NA	Water	EPA 9040C	

Analysis Batch: 471215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-2	WAP-2RR	Total/NA	Water	EPA 9040C	
180-174967-6	WAP-5S	Total/NA	Water	EPA 9040C	
LCS 180-471215/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 471491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-1	WAP-1	Total/NA	Water	EPA 9040C	
180-174967-12	WAP-8S	Total/NA	Water	EPA 9040C	
180-174967-19	DUP-2	Total/NA	Water	EPA 9040C	
LCS 180-471491/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-174967-12 DU	WAP-8S	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 665363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-1	WAP-1	Total/NA	Water	PrecSep-21	
180-174967-2	WAP-2RR	Total/NA	Water	PrecSep-21	
180-174967-3	WAP-3S	Total/NA	Water	PrecSep-21	
180-174967-4	WAP-3D	Total/NA	Water	PrecSep-21	
180-174967-5	WAP-4S	Total/NA	Water	PrecSep-21	
180-174967-6	WAP-5S	Total/NA	Water	PrecSep-21	
180-174967-7	WAP-5I	Total/NA	Water	PrecSep-21	
180-174967-8	WAP-5D	Total/NA	Water	PrecSep-21	
180-174967-9	WAP-6S	Total/NA	Water	PrecSep-21	
180-174967-10	WAP-7S	Total/NA	Water	PrecSep-21	
180-174967-11	WAP-7D	Total/NA	Water	PrecSep-21	
180-174967-12	WAP-8S	Total/NA	Water	PrecSep-21	
180-174967-13	WAP-8I	Total/NA	Water	PrecSep-21	
180-174967-14	WAP-8D	Total/NA	Water	PrecSep-21	
180-174967-15	WAP-9S	Total/NA	Water	PrecSep-21	
180-174967-16	WAP-9I	Total/NA	Water	PrecSep-21	
180-174967-17	WAP-9D	Total/NA	Water	PrecSep-21	
180-174967-18	DUP-1	Total/NA	Water	PrecSep-21	
180-174967-19	DUP-2	Total/NA	Water	PrecSep-21	
180-174967-20	FIELD BLANK 1	Total/NA	Water	PrecSep-21	
MB 160-665363/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-665363/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-174967-5 DU	WAP-4S	Total/NA	Water	PrecSep-21	

Prep Batch: 665441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-1	WAP-1	Total/NA	Water	PrecSep_0	
180-174967-2	WAP-2RR	Total/NA	Water	PrecSep_0	
180-174967-3	WAP-3S	Total/NA	Water	PrecSep_0	
180-174967-4	WAP-3D	Total/NA	Water	PrecSep_0	

Rad (Continued)

Prep Batch: 665441 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174967-5	WAP-4S	Total/NA	Water	PrecSep_0	
180-174967-6	WAP-5S	Total/NA	Water	PrecSep_0	
180-174967-7	WAP-5I	Total/NA	Water	PrecSep_0	
180-174967-8	WAP-5D	Total/NA	Water	PrecSep_0	
180-174967-9	WAP-6S	Total/NA	Water	PrecSep_0	
180-174967-10	WAP-7S	Total/NA	Water	PrecSep_0	
180-174967-11	WAP-7D	Total/NA	Water	PrecSep_0	
180-174967-12	WAP-8S	Total/NA	Water	PrecSep_0	
180-174967-13	WAP-8I	Total/NA	Water	PrecSep_0	
180-174967-14	WAP-8D	Total/NA	Water	PrecSep_0	
180-174967-15	WAP-9S	Total/NA	Water	PrecSep_0	
180-174967-16	WAP-9I	Total/NA	Water	PrecSep_0	
180-174967-17	WAP-9D	Total/NA	Water	PrecSep_0	
180-174967-18	DUP-1	Total/NA	Water	PrecSep_0	
180-174967-19	DUP-2	Total/NA	Water	PrecSep_0	
180-174967-20	FIELD BLANK 1	Total/NA	Water	PrecSep_0	
MB 160-665441/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-665441/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-174967-5 DU	WAP-4S	Total/NA	Water	PrecSep_0	

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301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

Chain of Custody Record

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Client Information	Sampler: Hayley Tolles	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-101845-14503.1
Client Contact: Britton Hundley	Phone:	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin:	Page: Page 1 of 3
Company: Haley & Aldrich, Inc.	PWSID:	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			Preservation Codes: N - None D - HNO3
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			Other:
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A		Total Number of containers	Special Instructions/Note:
Preservation Code:							N	N	D	D	D			
WAP-1	6-3-24	11:30	G	W			X	X	X	X	X		6	
WAP-2RQ	5-30-24	1420												
WAP-3S	5-30-24	1414												
WAP-3D	5-30-24	1240												
WAP-4S	5-31-24	1400												
WAP-5S	5-31-24	14:30												
WAP-5I	5-31-24	15:30												
WAP-5D	5-31-24	16:45												
WAP-6S	5-31-24	11:00												
WAP-7S	5-30-24	1210												
WAP-7D	5-30-24	1255												

180-174967 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Hayley Tolles	6-3-24 / 1330	ATLAS	Fedex	6-3-24 / 1330	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
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:

Ver: 04/02/2024

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Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Hayley Torres	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-101845-14503 2
Client Contact: Britton Hundley	Phone:	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin:	Page: Page 2 of 3
Company: Haley & Aldrich, Inc.	PWSID:	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			Preservation Codes: N - None D - HNO3
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			Other:
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A									Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D										
WAP-8S	5-31-24	1350	G	W			X	X	X	X	X									6	
WAP-8I	5-31-24	1500																			
WAD-8D	6-3-24	11:00																			
WAP-9S	5-30-24	16:40																			
WAP-9I	5-30-24	15:45																			
WAP-9D	5-31-24	11:11																			
Dup 1	5-30-24	X																			
Dup 2	5-31-24	X																			
MS 1	5-31-24	1300																			
MSD 1	5-31-24	1300																			
Field Blank 1	5-31-24	14:25																			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested. I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

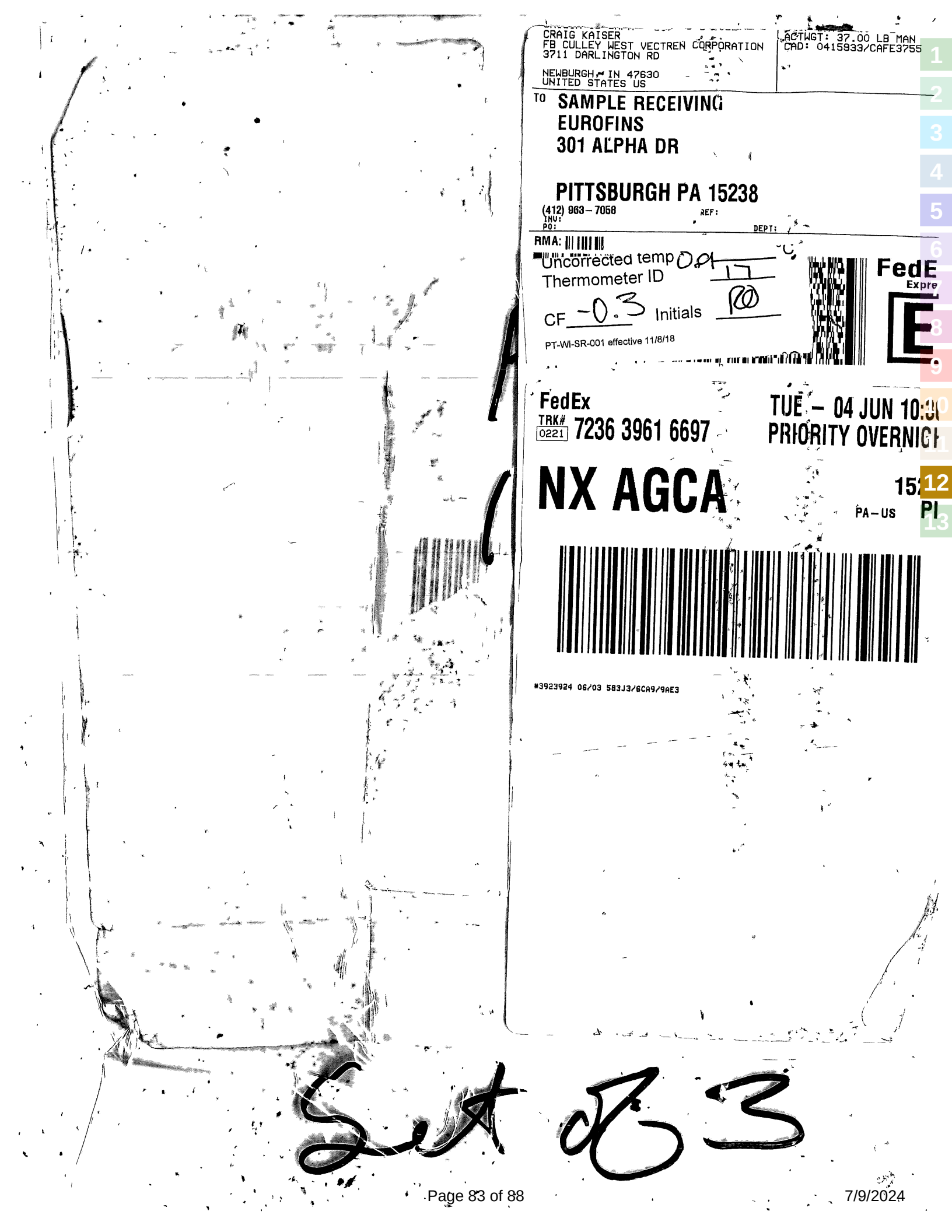
Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Hayley Torres	6-3-24/1330	ATLAS	Fedex	6-3-24/1330	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	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:

Ver: 04/02/2024


CRAIG KAISER
FB CULLEY WEST VECTREN CORPORATION
3711 DARLINGTON RD
NEWBURGH, IN 47630
UNITED STATES US
ACTWGT:
CAD: 041
TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR
PITTSBURGH PA 15238
(412) 963-7058
REF:
DEPT:
INV:
PO:
RMA:
Uncorrected temp 3.6 °C
Thermometer ID 17
CF -0.3 Initials RD
PT-WI-SR-001 effective 11/8/18
FedEx
TRK# 0221 7236 3961 6701
PRIORIT
NX AGCA
#3923924 06/03 583J3/6CA9/9AE3
180-174967 Waybill
FedEx
TRK# 0221 7236 3961 4135
TUE - 04 JUN 10:3
PRIORITY OVERNI
NX AGCA
1523
PA-US
PI
Uncorrected temp 3.3 °C
Thermometer ID 17
CF -0.3 Initials RD
PT-WI-SR-001 effective 11/8/18
#3923924 06/03 583J3/6CA9/9AE3
RT 198
FZ 197
10:30
A


CRAIG KAISER
FB CULLEY WEST VECTREN CORPORATION
3711 DARLINGTON RD
NEWBURGH IN 47630
UNITED STATES US
ACTWGT: 37.00 LB MAN
CAD: 0415933/CAFE3755
TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR
PITTSBURGH PA 15238
(412) 963-7058
INV:
PO:
REF:
DEPT:
RMA:
Uncorrected temp 0.1 °C
Thermometer ID 17
CF -0.3 Initials PO
PT-WI-SR-001 effective 11/8/18
FedEx
Expre
FedEx
TRK# 0221 7236 3961 6697
TUE - 04 JUN 10:3
PRIORITY OVERNIGH
NX AGCA
15
PA-US
PI
#3923924 06/03 583J3/6CA9/9AE3

Sat 03

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-516603.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-174967-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 7/8/2024			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR Groundwater Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
-
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WAP-1 (180-174967-1)	6/3/24	11:30 Eastern		Water			X	X	X	2	
WAP-2RR (180-174967-2)	5/30/24	14:20 Eastern		Water			X	X	X	2	
WAP-3S (180-174967-3)	5/30/24	14:14 Eastern		Water			X	X	X	2	
WAP-3D (180-174967-4)	5/30/24	12:40 Eastern		Water			X	X	X	2	
WAP-4S (180-174967-5)	5/31/24	14:00 Eastern		Water			X	X	X	2	
WAP-4S (180-174967-5DU)	5/31/24	14:00 Eastern	DU	Water			X	X		4	
WAP-5S (180-174967-6)	5/31/24	14:30 Eastern		Water			X	X	X	2	
WAP-5I (180-174967-7)	5/31/24	15:30 Eastern		Water			X	X	X	2	
WAP-5D (180-174967-8)	5/31/24	16:45 Eastern		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		6/6/24 1700	BPTHE			
2	Relinquished by:	Date/Time:	Company	Received by: M. Pinette	Date/Time: JUN 07 2024 0405	Company
3	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:

Eurofins Pittsburgh
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Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-516603.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 2 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-174967-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 7/8/2024			Preservation Codes: -
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR Groundwater Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WAP-6S (180-174967-9)	5/31/24	11:00 Eastern		Water			X	X	X	2	
WAP-7S (180-174967-10)	5/30/24	12:10 Eastern		Water			X	X	X	2	
WAP-7D (180-174967-11)	5/30/24	12:55 Eastern		Water			X	X	X	2	
WAP-8S (180-174967-12)	5/31/24	13:50 Eastern		Water			X	X	X	2	
WAP-8I (180-174967-13)	5/31/24	15:00 Eastern		Water			X	X	X	2	
WAP-8D (180-174967-14)	6/3/24	11:00 Eastern		Water			X	X	X	2	
WAP-9S (180-174967-15)	5/30/24	16:40 Eastern		Water			X	X	X	2	
WAP-9I (180-174967-16)	5/30/24	15:45 Eastern		Water			X	X	X	2	
WAP-9D (180-174967-17)	5/31/24	11:11 Eastern		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 10/6/24 1700	Company: EHN	Received by: M. Pinette	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: JUN 07 2024 0905	Company
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:

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Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-516603.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 3 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-174967-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 7/8/2024			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR Groundwater Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
-

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
DUP-1 (180-174967-18)	5/30/24	Eastern		Water			X	X	X	2	
DUP-2 (180-174967-19)	5/31/24	Eastern		Water			X	X	X	2	
FIELD BLANK 1 (180-174967-20)	5/31/24	14:25 Eastern		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		6/6/24 1700	EHHE	M. Pinette		
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: JUN 07 2024 0905	Company
3	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:

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-174967-1
SDG Number: FB Culley West

Login Number: 174967
List Number: 1
Creator: Kovitch, Christina M

List Source: Eurofins Pittsburgh

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.	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?	True	
There are no discrepancies between the containers received and the COC.	False	
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.	True	
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: 180-174967-1
SDG Number: FB Culley West

Login Number: 174967
List Number: 3
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 06/07/24 01:51 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.	True	
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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Todd Plating
Haley & Aldrich, Inc.
400 Augusta Street
Suite 100
Greenville, South Carolina 29601

Generated 6/30/2024 4:58:54 PM

JOB DESCRIPTION

CCR Groundwater Monitoring FB Culley West
FB Culley West

JOB NUMBER

180-174632-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

my EOL

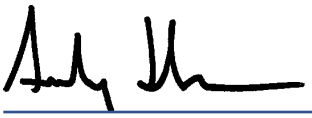
Job Notes

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



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Authorized for release by
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Job Narrative
180-174632-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 5/25/2024 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.6°C.

Receipt Exceptions
A Chain-of-Custody (COC) was not received with these samples: WAP-4I (180-174632-1), WAP-4D (180-174632-2), WAP-6I (180-174632-3) and WAP-6D (180-174632-4). The PM emailed a chain of custody on 5/29/24

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

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

Job ID: 180-174632-2 Eurofins Pittsburgh

Job Narrative
180-174632-2

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 5/25/2024 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.6°C.

Receipt Exceptions
A Chain-of-Custody (COC) was not received with these samples: WAP-4I (180-174632-1), WAP-4D (180-174632-2), WAP-6I (180-174632-3) and WAP-6D (180-174632-4). The PM emailed a chain of custody on 5/29/24

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.

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174632-1
SDG: FB Culley West

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174632-1
SDG: FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-24
California	State	2891	04-30-24 *
Connecticut	State	PH-0688	09-30-24
Florida	NELAP	E871008	06-30-24
Georgia	State	PA 02-00416	04-30-25
Illinois	NELAP	004375	07-31-25
Kansas	NELAP	E-10350	01-31-25
Kentucky (UST)	State	162013	04-30-23 *
Kentucky (WW)	State	KY98043	12-31-24
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-24
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-24
New Hampshire	NELAP	2030	04-04-24 *
New Jersey	NELAP	PA005	06-30-24
New York	NELAP	11182	04-01-25
North Carolina (WW/SW)	State	434	12-31-24
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-25
Pennsylvania	NELAP	02-00416	04-30-25
Rhode Island	State	LAO00362	01-01-25
South Carolina	State	89014	04-30-25
Texas	NELAP	T104704528	03-31-25
US Fish & Wildlife	US Federal Programs	058448	03-31-24 *
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462019-8	05-31-24 *
Virginia	NELAP	10043	07-14-24
West Virginia DEP	State	142	01-31-25
Wisconsin	State	998027800	08-31-24

Laboratory: Eurofins Cleveland

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	06-30-24
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 180-174632-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-08-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-24
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-24
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	03-31-25
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-24
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	10-31-24

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

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174632-1
SDG: FB Culley West

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-174632-1	WAP-4I	Water	05/22/24 15:15	05/25/24 10:00
180-174632-2	WAP-4D	Water	05/22/24 14:00	05/25/24 10:00
180-174632-3	WAP-6I	Water	05/23/24 11:54	05/25/24 10:00
180-174632-4	WAP-6D	Water	05/23/24 13:47	05/25/24 10:00

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174632-1
SDG: FB Culley West

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174632-1
SDG: FB Culley West

Client Sample ID: WAP-4I

Date Collected: 05/22/24 15:15
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470348	06/01/24 17:20	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			615146	05/31/24 11:00	KLC	EET CLE
	Instrument ID: I9									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			615179	05/31/24 21:06	RKT	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			615659	06/05/24 11:47	RKT	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	469913	05/28/24 09:36	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470080	05/29/24 11:37	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470360	06/01/24 11:04	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470051	05/29/24 10:18	LWM	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			999.28 mL	1.0 g	664298	06/03/24 07:47	MLT	EET SL
Total/NA	Analysis	9315		1			668351	06/27/24 08:27	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.28 mL	1.0 g	664299	06/03/24 07:51	MLT	EET SL
Total/NA	Analysis	9320		1			667439	06/21/24 14:41	SWS	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			668567	06/28/24 13:08	CAH	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-4D

Date Collected: 05/22/24 14:00
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470348	06/01/24 16:06	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			615146	05/31/24 11:26	KLC	EET CLE
	Instrument ID: I9									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			615179	05/31/24 21:21	RKT	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			615374	06/03/24 19:32	RKT	EET CLE
	Instrument ID: I14									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174632-1
SDG: FB Culley West

Client Sample ID: WAP-4D

Date Collected: 05/22/24 14:00
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			25 mL	25 mL	469913	05/28/24 09:36	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470080	05/29/24 11:38	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470360	06/01/24 11:08	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470051	05/29/24 10:18	LWM	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			999.64 mL	1.0 g	664298	06/03/24 07:47	MLT	EET SL
Total/NA	Analysis	9315		1			668351	06/27/24 08:28	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.64 mL	1.0 g	664299	06/03/24 07:51	MLT	EET SL
Total/NA	Analysis	9320		1			667439	06/21/24 14:41	SWS	EET SL
	Instrument ID: GFPCORANGE									
Total/NA	Analysis	Ra226_Ra228		1			668567	06/28/24 13:08	CAH	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-6I

Date Collected: 05/23/24 11:54
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470348	06/01/24 17:06	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			615146	05/31/24 11:21	KLC	EET CLE
	Instrument ID: I9									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			615179	05/31/24 21:08	RKT	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			615374	06/03/24 19:14	RKT	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	469913	05/28/24 09:36	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470080	05/29/24 11:39	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470360	06/01/24 11:35	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470055	05/29/24 10:45	LWM	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			999.02 mL	1.0 g	664298	06/03/24 07:47	MLT	EET SL
Total/NA	Analysis	9315		1			668351	06/27/24 08:28	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.02 mL	1.0 g	664299	06/03/24 07:51	MLT	EET SL
Total/NA	Analysis	9320		1			667439	06/21/24 14:41	SWS	EET SL
	Instrument ID: GFPCORANGE									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174632-1
SDG: FB Culley West

Client Sample ID: WAP-6I

Date Collected: 05/23/24 11:54
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1			668567	06/28/24 13:08	CAH	EET SL

Client Sample ID: WAP-6D

Date Collected: 05/23/24 13:47
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	470348	06/01/24 16:51	AM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			615146	05/31/24 11:30	KLC	EET CLE
	Instrument ID: I9									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			615179	05/31/24 21:23	RKT	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	614884	05/30/24 14:00	TQ6W	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			615374	06/03/24 19:34	RKT	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			25 mL	25 mL	469913	05/28/24 09:36	RJR	EET PIT
Total/NA	Analysis	EPA 7470A		1			470080	05/29/24 11:40	MTW	EET PIT
	Instrument ID: HGZ									
Total/NA	Analysis	EPA 9040C		1			470360	06/01/24 09:57	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	470055	05/29/24 10:45	LWM	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			999.13 mL	1.0 g	664298	06/03/24 07:47	MLT	EET SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	668351	06/27/24 08:28	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.13 mL	1.0 g	664299	06/03/24 07:51	MLT	EET SL
Total/NA	Analysis	9320		1			667438	06/21/24 14:59	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			668567	06/28/24 13:08	CAH	EET SL
	Instrument ID: NOEQUIP									

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174632-1
SDG: FB Culley West

Analyst References:

Lab: EET CLE
- Batch Type: Prep
  - TQ6W = Bryan Perelka
- Batch Type: Analysis
  - KLC = Karen Counts
  - RKT = Roger Toth

Lab: EET PIT
- Batch Type: Prep
  - RJR = Ron Rosenbaum
- Batch Type: Analysis
  - AM = Adzuira Musule
  - BAB = Brooke Batyi
  - LWM = Leslie McIntire
  - MTW = Michael Wesoloski

Lab: EET SL
- Batch Type: Prep
  - MLT = Michaela Tiemeyer
- Batch Type: Analysis
  - CAH = Chris Hough
  - SCB = Sarah Bernsen
  - SWS = Seth Stubblefield

Client Sample ID: WAP-4I
Date Collected: 05/22/24 15:15
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-1
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18		1.0	0.71	mg/L			06/01/24 17:20	1
Fluoride	0.13		0.10	0.026	mg/L			06/01/24 17:20	1
Sulfate	38		1.0	0.76	mg/L			06/01/24 17:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		05/30/24 14:00	05/31/24 11:00	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/30/24 14:00	05/31/24 21:06	1
Arsenic	0.0030	J	0.0050	0.00075	mg/L		05/30/24 14:00	05/31/24 21:06	1
Barium	0.12		0.0050	0.0022	mg/L		05/30/24 14:00	05/31/24 21:06	1
Beryllium	ND		0.0010	0.00062	mg/L		05/30/24 14:00	06/05/24 11:47	1
Cadmium	ND		0.0010	0.00020	mg/L		05/30/24 14:00	05/31/24 21:06	1
Calcium	31		1.0	0.25	mg/L		05/30/24 14:00	05/31/24 21:06	1
Chromium	ND		0.0050	0.0012	mg/L		05/30/24 14:00	05/31/24 21:06	1
Cobalt	0.00045	J	0.0010	0.00019	mg/L		05/30/24 14:00	05/31/24 21:06	1
Lead	ND		0.0010	0.00045	mg/L		05/30/24 14:00	05/31/24 21:06	1
Lithium	0.0029	J	0.0080	0.0017	mg/L		05/30/24 14:00	06/05/24 11:47	1
Molybdenum	0.0019	J	0.0050	0.0011	mg/L		05/30/24 14:00	05/31/24 21:06	1
Selenium	ND		0.0050	0.00089	mg/L		05/30/24 14:00	06/05/24 11:47	1
Thallium	ND		0.0010	0.00020	mg/L		05/30/24 14:00	05/31/24 21:06	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/28/24 09:36	05/29/24 11:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	180		10	10	mg/L			05/29/24 10:18	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.5	HF	0.1	0.1	SU			06/01/24 11:04	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.329		0.124	0.127	1.00	0.119	pCi/L	06/03/24 07:47	06/27/24 08:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.3*		*30 - 110*	*06/03/24 07:47*	*06/27/24 08:27*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.327	U	0.389	0.390	1.00	0.837	pCi/L	06/03/24 07:51	06/21/24 14:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.3*		*30 - 110*	*06/03/24 07:51*	*06/21/24 14:41*	*1*

Client Sample ID: WAP-4I
Date Collected: 05/22/24 15:15
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-1
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*75.5*		*30 - 110*	*06/03/24 07:51*	*06/21/24 14:41*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.00178	U	0.408	0.410	5.00	0.837	pCi/L		06/28/24 13:08	1

Client Sample ID: WAP-4D
Date Collected: 05/22/24 14:00
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-2
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20**		1.0	0.71	mg/L			06/01/24 16:06	1
Fluoride	**0.14**		0.10	0.026	mg/L			06/01/24 16:06	1
Sulfate	**24**		1.0	0.76	mg/L			06/01/24 16:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		05/30/24 14:00	05/31/24 11:26	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/30/24 14:00	05/31/24 21:21	1
Arsenic	**0.010**		0.0050	0.00075	mg/L		05/30/24 14:00	05/31/24 21:21	1
Barium	**0.28**		0.0050	0.0022	mg/L		05/30/24 14:00	05/31/24 21:21	1
Beryllium	ND		0.0010	0.00062	mg/L		05/30/24 14:00	06/03/24 19:32	1
Cadmium	ND		0.0010	0.00020	mg/L		05/30/24 14:00	05/31/24 21:21	1
Calcium	**49**		1.0	0.25	mg/L		05/30/24 14:00	05/31/24 21:21	1
Chromium	ND		0.0050	0.0012	mg/L		05/30/24 14:00	05/31/24 21:21	1
Cobalt	**0.00024**	**J**	0.0010	0.00019	mg/L		05/30/24 14:00	05/31/24 21:21	1
Lead	ND		0.0010	0.00045	mg/L		05/30/24 14:00	05/31/24 21:21	1
Lithium	**0.0037**	**J**	0.0080	0.0017	mg/L		05/30/24 14:00	06/03/24 19:32	1
Molybdenum	**0.0055**		0.0050	0.0011	mg/L		05/30/24 14:00	05/31/24 21:21	1
Selenium	ND		0.0050	0.00089	mg/L		05/30/24 14:00	06/03/24 19:32	1
Thallium	**0.00034**	**J**	0.0010	0.00020	mg/L		05/30/24 14:00	05/31/24 21:21	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/28/24 09:36	05/29/24 11:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**220**		10	10	mg/L			05/29/24 10:18	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.6**	**HF**	0.1	0.1	SU			06/01/24 11:08	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.331**		0.132	0.136	1.00	0.145	pCi/L	06/03/24 07:47	06/27/24 08:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.5*		*30 - 110*	*06/03/24 07:47*	*06/27/24 08:28*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.193	U	0.371	0.371	1.00	0.646	pCi/L	06/03/24 07:51	06/21/24 14:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.5*		*30 - 110*	*06/03/24 07:51*	*06/21/24 14:41*	*1*

Client Sample ID: WAP-4D
Date Collected: 05/22/24 14:00
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-2
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*81.9*		*30 - 110*	*06/03/24 07:51*	*06/21/24 14:41*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.524	U	0.394	0.395	5.00	0.646	pCi/L		06/28/24 13:08	1

Client Sample ID: WAP-6I
Date Collected: 05/23/24 11:54
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-3
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21**		1.0	0.71	mg/L			06/01/24 17:06	1
Fluoride	**0.15**		0.10	0.026	mg/L			06/01/24 17:06	1
Sulfate	**40**		1.0	0.76	mg/L			06/01/24 17:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		05/30/24 14:00	05/31/24 11:21	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/30/24 14:00	05/31/24 21:08	1
Arsenic	**0.0048**	**J**	0.0050	0.00075	mg/L		05/30/24 14:00	05/31/24 21:08	1
Barium	**0.15**		0.0050	0.0022	mg/L		05/30/24 14:00	05/31/24 21:08	1
Beryllium	ND		0.0010	0.00062	mg/L		05/30/24 14:00	06/03/24 19:14	1
Cadmium	ND		0.0010	0.00020	mg/L		05/30/24 14:00	05/31/24 21:08	1
Calcium	**34**		1.0	0.25	mg/L		05/30/24 14:00	05/31/24 21:08	1
Chromium	ND		0.0050	0.0012	mg/L		05/30/24 14:00	05/31/24 21:08	1
Cobalt	**0.00024**	**J**	0.0010	0.00019	mg/L		05/30/24 14:00	05/31/24 21:08	1
Lead	ND		0.0010	0.00045	mg/L		05/30/24 14:00	05/31/24 21:08	1
Lithium	**0.0045**	**J**	0.0080	0.0017	mg/L		05/30/24 14:00	06/03/24 19:14	1
Molybdenum	**0.0044**	**J**	0.0050	0.0011	mg/L		05/30/24 14:00	05/31/24 21:08	1
Selenium	ND		0.0050	0.00089	mg/L		05/30/24 14:00	06/03/24 19:14	1
Thallium	ND		0.0010	0.00020	mg/L		05/30/24 14:00	05/31/24 21:08	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/28/24 09:36	05/29/24 11:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**200**		10	10	mg/L			05/29/24 10:45	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.6**	**HF**	0.1	0.1	SU			06/01/24 11:35	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.160**		0.0872	0.0884	1.00	0.107	pCi/L	06/03/24 07:47	06/27/24 08:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*30 - 110*	*06/03/24 07:47*	*06/27/24 08:28*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.163	U	0.320	0.321	1.00	0.659	pCi/L	06/03/24 07:51	06/21/24 14:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.3*		*30 - 110*	*06/03/24 07:51*	*06/21/24 14:41*	*1*

Client Sample ID: WAP-6I
Date Collected: 05/23/24 11:54
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-3
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*78.9*		*30 - 110*	*06/03/24 07:51*	*06/21/24 14:41*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.00314	U	0.332	0.333	5.00	0.659	pCi/L		06/28/24 13:08	1

Client Sample ID: WAP-6D

Date Collected: 05/23/24 13:47
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-4

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22**		1.0	0.71	mg/L			06/01/24 16:51	1
Fluoride	**0.14**		0.10	0.026	mg/L			06/01/24 16:51	1
Sulfate	**42**		1.0	0.76	mg/L			06/01/24 16:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		05/30/24 14:00	05/31/24 11:30	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/30/24 14:00	05/31/24 21:23	1
Arsenic	**0.0066**		0.0050	0.00075	mg/L		05/30/24 14:00	05/31/24 21:23	1
Barium	**0.19**		0.0050	0.0022	mg/L		05/30/24 14:00	05/31/24 21:23	1
Beryllium	ND		0.0010	0.00062	mg/L		05/30/24 14:00	06/03/24 19:34	1
Cadmium	ND		0.0010	0.00020	mg/L		05/30/24 14:00	05/31/24 21:23	1
Calcium	**40**		1.0	0.25	mg/L		05/30/24 14:00	05/31/24 21:23	1
Chromium	ND		0.0050	0.0012	mg/L		05/30/24 14:00	05/31/24 21:23	1
Cobalt	ND		0.0010	0.00019	mg/L		05/30/24 14:00	05/31/24 21:23	1
Lead	ND		0.0010	0.00045	mg/L		05/30/24 14:00	05/31/24 21:23	1
Lithium	**0.0039**	**J**	0.0080	0.0017	mg/L		05/30/24 14:00	06/03/24 19:34	1
Molybdenum	**0.0020**	**J**	0.0050	0.0011	mg/L		05/30/24 14:00	05/31/24 21:23	1
Selenium	ND		0.0050	0.00089	mg/L		05/30/24 14:00	06/03/24 19:34	1
Thallium	ND		0.0010	0.00020	mg/L		05/30/24 14:00	05/31/24 21:23	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/28/24 09:36	05/29/24 11:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**210**		10	10	mg/L			05/29/24 10:45	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			06/01/24 09:57	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.337**		0.123	0.127	1.00	0.113	pCi/L	06/03/24 07:47	06/27/24 08:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.3*		*30 - 110*	*06/03/24 07:47*	*06/27/24 08:28*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.485	U	0.535	0.537	1.00	0.874	pCi/L	06/03/24 07:51	06/21/24 14:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.3*		*30 - 110*	*06/03/24 07:51*	*06/21/24 14:59*	*1*

Client Sample ID: WAP-6D
Date Collected: 05/23/24 13:47
Date Received: 05/25/24 10:00

Lab Sample ID: 180-174632-4
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*80.0*		*30 - 110*	*06/03/24 07:51*	*06/21/24 14:59*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.823	U	0.549	0.552	5.00	0.874	pCi/L		06/28/24 13:08	1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-470348/6
Matrix: Water
Analysis Batch: 470348

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			06/01/24 09:43	1
Fluoride	ND		0.10	0.026	mg/L			06/01/24 09:43	1
Sulfate	ND		1.0	0.76	mg/L			06/01/24 09:43	1

Lab Sample ID: LCS 180-470348/7
Matrix: Water
Analysis Batch: 470348

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.6		mg/L		101	80 - 120
Fluoride	2.50	2.50		mg/L		100	80 - 120
Sulfate	50.0	50.5		mg/L		101	80 - 120

Method: EPA 6010D - Metals (ICP)

Lab Sample ID: MB 240-614884/1-A
Matrix: Water
Analysis Batch: 615146

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		05/30/24 14:00	05/31/24 10:52	1

Lab Sample ID: LCS 240-614884/2-A
Matrix: Water
Analysis Batch: 615146

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	0.970		mg/L		97	80 - 120

Lab Sample ID: 180-174632-1 MS
Matrix: Water
Analysis Batch: 615146

Client Sample ID: WAP-4I
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	ND		1.00	1.07		mg/L		107	75 - 125

Lab Sample ID: 180-174632-1 MSD
Matrix: Water
Analysis Batch: 615146

Client Sample ID: WAP-4I
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	ND		1.00	1.08		mg/L		108	75 - 125	1	20

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-614884/1-A
Matrix: Water
Analysis Batch: 615179

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/30/24 14:00	05/31/24 20:56	1
Arsenic	ND		0.0050	0.00075	mg/L		05/30/24 14:00	05/31/24 20:56	1
Barium	ND		0.0050	0.0022	mg/L		05/30/24 14:00	05/31/24 20:56	1
Cadmium	ND		0.0010	0.00020	mg/L		05/30/24 14:00	05/31/24 20:56	1
Calcium	ND		1.0	0.25	mg/L		05/30/24 14:00	05/31/24 20:56	1
Chromium	ND		0.0050	0.0012	mg/L		05/30/24 14:00	05/31/24 20:56	1
Cobalt	ND		0.0010	0.00019	mg/L		05/30/24 14:00	05/31/24 20:56	1
Lead	ND		0.0010	0.00045	mg/L		05/30/24 14:00	05/31/24 20:56	1
Molybdenum	ND		0.0050	0.0011	mg/L		05/30/24 14:00	05/31/24 20:56	1
Thallium	ND		0.0010	0.00020	mg/L		05/30/24 14:00	05/31/24 20:56	1

Lab Sample ID: MB 240-614884/1-A
Matrix: Water
Analysis Batch: 615374

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	0.00062	mg/L		05/30/24 14:00	06/03/24 19:09	1
Lithium	ND		0.0080	0.0017	mg/L		05/30/24 14:00	06/03/24 19:09	1
Selenium	ND		0.0050	0.00089	mg/L		05/30/24 14:00	06/03/24 19:09	1

Lab Sample ID: LCS 240-614884/3-A
Matrix: Water
Analysis Batch: 615179

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.100	0.0888		mg/L		89	80 - 120
Arsenic	1.00	0.888		mg/L		89	80 - 120
Barium	1.00	0.888		mg/L		89	80 - 120
Cadmium	0.500	0.452		mg/L		90	80 - 120
Calcium	25.0	22.8		mg/L		91	80 - 120
Chromium	0.500	0.456		mg/L		91	80 - 120
Cobalt	0.500	0.447		mg/L		89	80 - 120
Lead	0.500	0.459		mg/L		92	80 - 120
Molybdenum	0.500	0.441		mg/L		88	80 - 120
Thallium	1.00	0.942		mg/L		94	80 - 120

Lab Sample ID: LCS 240-614884/3-A
Matrix: Water
Analysis Batch: 615374

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	0.500	0.432		mg/L		86	80 - 120
Lithium	0.500	0.470		mg/L		94	80 - 120
Selenium	1.00	0.899		mg/L		90	80 - 120

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-174632-3 MS
Matrix: Water
Analysis Batch: 615179

Client Sample ID: WAP-6I
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		0.100	0.100		mg/L		100	80 - 120
Arsenic	0.0048	J	1.00	0.996		mg/L		99	80 - 120
Barium	0.15		1.00	1.14		mg/L		99	80 - 120
Cadmium	ND		0.500	0.500		mg/L		100	80 - 120
Calcium	34		25.0	60.5		mg/L		104	80 - 120
Chromium	ND		0.500	0.511		mg/L		102	80 - 120
Cobalt	0.00024	J	0.500	0.490		mg/L		98	80 - 120
Lead	ND		0.500	0.510		mg/L		102	80 - 120
Molybdenum	0.0044	J	0.500	0.508		mg/L		101	80 - 120
Thallium	ND		1.00	1.04		mg/L		104	80 - 120

Lab Sample ID: 180-174632-3 MS
Matrix: Water
Analysis Batch: 615374

Client Sample ID: WAP-6I
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	ND		0.500	0.460		mg/L		92	80 - 120
Lithium	0.0045	J	0.500	0.507		mg/L		101	80 - 120
Selenium	ND		1.00	0.929		mg/L		93	80 - 120

Lab Sample ID: 180-174632-3 MSD
Matrix: Water
Analysis Batch: 615179

Client Sample ID: WAP-6I
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		0.100	0.0983		mg/L		98	80 - 120	2	20
Arsenic	0.0048	J	1.00	0.956		mg/L		95	80 - 120	4	20
Barium	0.15		1.00	1.12		mg/L		97	80 - 120	2	20
Cadmium	ND		0.500	0.490		mg/L		98	80 - 120	2	20
Calcium	34		25.0	58.9		mg/L		98	80 - 120	3	20
Chromium	ND		0.500	0.491		mg/L		98	80 - 120	4	20
Cobalt	0.00024	J	0.500	0.472		mg/L		94	80 - 120	4	20
Lead	ND		0.500	0.492		mg/L		98	80 - 120	3	20
Molybdenum	0.0044	J	0.500	0.488		mg/L		97	80 - 120	4	20
Thallium	ND		1.00	1.01		mg/L		101	80 - 120	3	20

Lab Sample ID: 180-174632-3 MSD
Matrix: Water
Analysis Batch: 615374

Client Sample ID: WAP-6I
Prep Type: Total Recoverable
Prep Batch: 614884

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Beryllium	ND		0.500	0.450		mg/L		90	80 - 120	2	20
Lithium	0.0045	J	0.500	0.493		mg/L		98	80 - 120	3	20
Selenium	ND		1.00	0.919		mg/L		92	80 - 120	1	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-469913/1-A
Matrix: Water
Analysis Batch: 470080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 469913

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/28/24 09:33	05/29/24 11:22	1

Lab Sample ID: LCS 180-469913/2-A
Matrix: Water
Analysis Batch: 470080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 469913

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00250	0.00248		mg/L		99	80 - 120

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-470360/1
Matrix: Water
Analysis Batch: 470360

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-470360/24
Matrix: Water
Analysis Batch: 470360

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

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

Lab Sample ID: MB 180-470051/1
Matrix: Water
Analysis Batch: 470051

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		10	10	mg/L			05/29/24 10:18	1

Lab Sample ID: LCS 180-470051/2
Matrix: Water
Analysis Batch: 470051

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	417	414		mg/L		99	85 - 115

Lab Sample ID: 180-174632-1 DU
Matrix: Water
Analysis Batch: 470051

Client Sample ID: WAP-4I
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	180		174		mg/L		4	10

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

Lab Sample ID: MB 180-470055/1
Matrix: Water
Analysis Batch: 470055

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		10	10	mg/L			05/29/24 10:45	1

Lab Sample ID: LCS 180-470055/2
Matrix: Water
Analysis Batch: 470055

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			417	416		mg/L		100	85 - 115		

Lab Sample ID: 180-174632-4 DU
Matrix: Water
Analysis Batch: 470055

Client Sample ID: WAP-6D
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	210			212		mg/L				2	10

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-664298/1-A
Matrix: Water
Analysis Batch: 668232

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 664298

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01915	U	0.0510	0.0510	1.00	0.0985	pCi/L	06/03/24 07:47	06/27/24 08:10	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.5*		*30 - 110*	*06/03/24 07:47*	*06/27/24 08:10*	*1*

Lab Sample ID: LCS 160-664298/2-A
Matrix: Water
Analysis Batch: 668351

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 664298

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			11.3	9.242		0.996	1.00	0.105	pCi/L	82	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*98.5*		*30 - 110*

Lab Sample ID: 180-174632-3 DU
Matrix: Water
Analysis Batch: 668351

Client Sample ID: WAP-6I
Prep Type: Total/NA
Prep Batch: 664298

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.160			0.1619		0.103	1.00	0.137	pCi/L			0.01	1

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 180-174632-3 DU
Matrix: Water
Analysis Batch: 668351

Client Sample ID: WAP-6I
Prep Type: Total/NA
Prep Batch: 664298

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	94.8		30 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-664299/1-A
Matrix: Water
Analysis Batch: 667439

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 664299

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1547	U	0.382	0.382	1.00	0.681	pCi/L	06/03/24 07:51	06/21/24 14:40	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		30 - 110	06/03/24 07:51	06/21/24 14:40	1
Y Carrier	73.6		30 - 110	06/03/24 07:51	06/21/24 14:40	1

Lab Sample ID: LCS 160-664299/2-A
Matrix: Water
Analysis Batch: 667439

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 664299

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.83	6.850		1.21	1.00	0.793	pCi/L	78	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	98.5		30 - 110
Y Carrier	68.8		30 - 110

Lab Sample ID: 180-174632-3 DU
Matrix: Water
Analysis Batch: 667438

Client Sample ID: WAP-6I
Prep Type: Total/NA
Prep Batch: 664299

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	-0.163	U		-0.2074	U	0.360	1.00	0.739	pCi/L			0.07	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	94.8		30 - 110
Y Carrier	79.3		30 - 110

HPLC/IC

Analysis Batch: 470348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total/NA	Water	EPA 9056A	
180-174632-2	WAP-4D	Total/NA	Water	EPA 9056A	
180-174632-3	WAP-6I	Total/NA	Water	EPA 9056A	
180-174632-4	WAP-6D	Total/NA	Water	EPA 9056A	
MB 180-470348/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-470348/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 469913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total/NA	Water	7470A	
180-174632-2	WAP-4D	Total/NA	Water	7470A	
180-174632-3	WAP-6I	Total/NA	Water	7470A	
180-174632-4	WAP-6D	Total/NA	Water	7470A	
MB 180-469913/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-469913/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 470080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total/NA	Water	EPA 7470A	469913
180-174632-2	WAP-4D	Total/NA	Water	EPA 7470A	469913
180-174632-3	WAP-6I	Total/NA	Water	EPA 7470A	469913
180-174632-4	WAP-6D	Total/NA	Water	EPA 7470A	469913
MB 180-469913/1-A	Method Blank	Total/NA	Water	EPA 7470A	469913
LCS 180-469913/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	469913

Prep Batch: 614884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total Recoverable	Water	3005A	
180-174632-2	WAP-4D	Total Recoverable	Water	3005A	
180-174632-3	WAP-6I	Total Recoverable	Water	3005A	
180-174632-4	WAP-6D	Total Recoverable	Water	3005A	
MB 240-614884/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-614884/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-614884/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-174632-1 MS	WAP-4I	Total Recoverable	Water	3005A	
180-174632-1 MSD	WAP-4I	Total Recoverable	Water	3005A	
180-174632-3 MS	WAP-6I	Total Recoverable	Water	3005A	
180-174632-3 MSD	WAP-6I	Total Recoverable	Water	3005A	

Analysis Batch: 615146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total Recoverable	Water	EPA 6010D	614884
180-174632-2	WAP-4D	Total Recoverable	Water	EPA 6010D	614884
180-174632-3	WAP-6I	Total Recoverable	Water	EPA 6010D	614884
180-174632-4	WAP-6D	Total Recoverable	Water	EPA 6010D	614884
MB 240-614884/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	614884
LCS 240-614884/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	614884
180-174632-1 MS	WAP-4I	Total Recoverable	Water	EPA 6010D	614884
180-174632-1 MSD	WAP-4I	Total Recoverable	Water	EPA 6010D	614884

Metals

Analysis Batch: 615179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total Recoverable	Water	EPA 6020B	614884
180-174632-2	WAP-4D	Total Recoverable	Water	EPA 6020B	614884
180-174632-3	WAP-6I	Total Recoverable	Water	EPA 6020B	614884
180-174632-4	WAP-6D	Total Recoverable	Water	EPA 6020B	614884
MB 240-614884/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	614884
LCS 240-614884/3-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	614884
180-174632-3 MS	WAP-6I	Total Recoverable	Water	EPA 6020B	614884
180-174632-3 MSD	WAP-6I	Total Recoverable	Water	EPA 6020B	614884

Analysis Batch: 615374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-2	WAP-4D	Total Recoverable	Water	EPA 6020B	614884
180-174632-3	WAP-6I	Total Recoverable	Water	EPA 6020B	614884
180-174632-4	WAP-6D	Total Recoverable	Water	EPA 6020B	614884
MB 240-614884/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	614884
LCS 240-614884/3-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	614884
180-174632-3 MS	WAP-6I	Total Recoverable	Water	EPA 6020B	614884
180-174632-3 MSD	WAP-6I	Total Recoverable	Water	EPA 6020B	614884

Analysis Batch: 615659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total Recoverable	Water	EPA 6020B	614884

General Chemistry

Analysis Batch: 470051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total/NA	Water	SM 2540C	
180-174632-2	WAP-4D	Total/NA	Water	SM 2540C	
MB 180-470051/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-470051/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-174632-1 DU	WAP-4I	Total/NA	Water	SM 2540C	

Analysis Batch: 470055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-3	WAP-6I	Total/NA	Water	SM 2540C	
180-174632-4	WAP-6D	Total/NA	Water	SM 2540C	
MB 180-470055/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-470055/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-174632-4 DU	WAP-6D	Total/NA	Water	SM 2540C	

Analysis Batch: 470360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total/NA	Water	EPA 9040C	
180-174632-2	WAP-4D	Total/NA	Water	EPA 9040C	
180-174632-3	WAP-6I	Total/NA	Water	EPA 9040C	
180-174632-4	WAP-6D	Total/NA	Water	EPA 9040C	
LCS 180-470360/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
LCS 180-470360/24	Lab Control Sample	Total/NA	Water	EPA 9040C	

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-174632-1
SDG: FB Culley West

Rad

Prep Batch: 664298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total/NA	Water	PrecSep-21	
180-174632-2	WAP-4D	Total/NA	Water	PrecSep-21	
180-174632-3	WAP-6I	Total/NA	Water	PrecSep-21	
180-174632-4	WAP-6D	Total/NA	Water	PrecSep-21	
MB 160-664298/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-664298/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-174632-3 DU	WAP-6I	Total/NA	Water	PrecSep-21	

Prep Batch: 664299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-174632-1	WAP-4I	Total/NA	Water	PrecSep_0	
180-174632-2	WAP-4D	Total/NA	Water	PrecSep_0	
180-174632-3	WAP-6I	Total/NA	Water	PrecSep_0	
180-174632-4	WAP-6D	Total/NA	Water	PrecSep_0	
MB 160-664299/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-664299/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-174632-3 DU	WAP-6I	Total/NA	Water	PrecSep_0	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Hayley Tolles	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-101645-14503.1
Client Contact: Britton Hundley	Phone:	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin:	Page: Page 1 of 2
Company: Haley & Aldrich, Inc	PWSID:	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			Preservation Codes: N - None; D - HNO3
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			Other:
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_24D	2540C Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A								Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D									
WAP-4S	5-23-24	10:30	G	W			X	X	X	X	X								6	
WAP-4I	5-22-24	15:15	G	W															6	
WAP-4D	5-22-24	1400	G	W															6	
WAP-5S	5-22-24	1050	G	W															6	
WAP-5I	5-22-24	1330	G	W															6	
WAP-5D	5-22-24	1445	G	W															6	
WAP-6I	5-23-24	1154	G	W															6	
WAP-6D	5-23-24	1347	G	W															6	
WAP-8S	5-23-24	11:40	G	W															6	
WAP-8I	5-23-24	1246	G	W															6	
WAP-8D	5-23-24	17:45	G	W															6	

Total Number of containers: 66

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: Date: Time: Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Hayley Tolles	5-24-24 / 12:00	ATLAS	FedEx	5-24-24 / 12:00	
Relinquished by:	Date/Time:	Company	Received by: D Watson	5-25-24 10:00	Company: BLITAE
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:

Ver: 04/02/2024

180-174632 Chain of Custody

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Hayley Toles	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-101845-14503.1
Client Contact: Britton Hundley	Phone:	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin:	Page: Page 3 of 3
Company: Haley & Aldrich, Inc.	PWSID:	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			Preservation Codes: N - None D - HNO3
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			Other:
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A										Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D											
MS 1	5-22-24	1400	G	WT			X	X	X	X	X										6	
MSD 1	5-22-24	1400	G	WT			X	X	X	X	X										6	
DUP 2	5-23-24		G	W			X	X	X	X	X										6	
WAP-1	5-22-24	10:30	G	W			X	X	X	X	X										6	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Hayley Toles	5-24-24 / 12:00	ATLAS	Fedex	5-24-24 / 12:00	
Relinquished by:	Date/Time:	Company	Received by: D Watson	Date/Time: 5-25-24	Company EHM
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10:00	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 04/02/2024

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Hayley Tolles	Lab PM: Johnson, Andy	Carrier Tracking No(s)	COC No: 180-101845-14503 1
Client Contact: Britton Hundley	Phone	E-Mail: Andy Johnson@et eurofinsus com	State of Origin	Page: Page 1 of 2
Company: Haley & Aldrich, Inc	PWSID	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			Preservation Codes: N - None D - HNO3
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			Other:
Site	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D		
WAP-4S	5-23-24	10:30	G	W			X	X	X	X	X	6	
WAP-4I	5-22-24	15:15	G	W								6	
WAP-4D	5-22-24	1400	G	W								6	
WAP-5S	5-22-24	1050	G	W								6	
WAP-5I	5-22-24	1330	G	W								6	
WAP-5D	5-22-24	1445	G	W								6	
WAP-6I	5-23-24	1154	G	W								6	
WAP-6D	5-23-24	1347	G	W								6	
WAP-8S	5-23-24	11:40	G	W								6	
WAP-8I	5-23-24	1246	G	W								6	
WAP-8D	5-23-24	11:45	G	W								6	

180-174632-01 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Hayley Tolles	5-24-24 / 12:00	ATLAS	Fedex	5-24-24 / 12:00	
Relinquished by:	Date/Time	Company	Received by:	Date/Time: 05/28/24 0930	Company: EAL NE
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

Ver: 04/02/2024

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Phone (412) 963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Hayley Torres	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-101845-14503 1
Client Contact: Britton Hundley	Phone:	E-Mail: Andy Johnson@et eurofinsus com	State of Origin:	Page: Page 2 of 2
Company: Haley & Aldrich, Inc	PWSID:	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			Preservation Codes: N - None D - HNO3
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			Other:
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D		
MS 1	5-22-24	1400	G	WT			X	X	X	X	X	6	
MSD 1	5-22-24	1400	G	WT			X	X	X	X	X	6	
DuP 2	5-23-24		G	W			X	X	X	X	X	6	
WAP-1	5-22-24	10:30	G	W			X	X	X	X	X	6	

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Hayley Torres	5-24-24 / 12:00	ATLAS	Fedex	5-24-24 / 12:00	
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
				05/28/24 0930	ETNE
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

Ver: 04/02/2024

Shannon Ryan

From: Andrew Johnson
Sent: Wednesday, May 29, 2024 2:29 PM
To: Christina m Kovitch; Pittsburgh - Sample Receiving
Subject: RE: 174632 - please take a picture of each of the FedEx shipping labels for the three out of temp coolers we received yesterday and send them to me
Attachments: 1000023247.jpg; 1000023248.jpg

INFO: INTERNAL EMAIL - Sent from your own Eurofins email domain.

Please sign and date the attached COC for samples WAP-4I, WAP-4D, WAP-6I and WAP-6D that arrived on Saturday and were logged under 174632.

The client does not want the over-temp samples that arrived 5/28 to be analyzed and will be re-sampling them.

Andy Johnson
Project Manager

Eurofins Environment Testing Northeast, LLC
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238

Cell: 615-818-9567

Andy.Johnson@ET.EurofinsUS.com
www.EurofinsUS.com/Env



From: Christina m Kovitch <Chris.Kovitch@et.eurofinsus.com>
Sent: Wednesday, May 29, 2024 12:54 PM
To: Andrew Johnson <Andy.Johnson@et.eurofinsus.com>; Pittsburgh - Sample Receiving <Pittsburgh-SampleReceiving@et.eurofinsus.com>
Subject: RE: 174632 - please take a picture of each of the FedEx shipping labels for the three out of temp coolers we received yesterday and send them to me

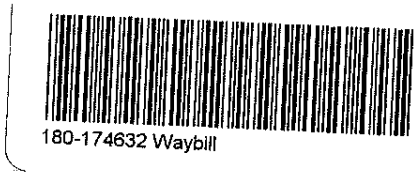
INFO: INTERNAL EMAIL - Sent from your own Eurofins email domain.

LET US ALL KNOW IF WE ARE ANALYZING

Christina M. Kovitch
Shipping and Receiving Department Manager

Eurofins Environment Testing US
301 Alpha Drive
Pittsburgh, Pa 15238

Direct: 412-963-2429



4.8

CF = -0.3

20

NO COC

D. Watson
EPi # NE
5-25-24
10:00

CRAIG KAISER
FB CULLEY VECTREN CORPORATION
3711 DARLINGTON ROAD

NEWBURGH , IN 47630
UNITED STATES US

ACTWGT: 25.00 LB MAN
CAD: 0415933/CAFE3755

Part # 159469-494 MTW EXP 10/24

TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR

2 of 3

PITTSBURGH PA 15238
(412) 963-7058

INV:
PO:
REF:
DEPT:

RMA:

Uncorrected temp 17.5 °C
Thermometer ID 17

CF -0.3 Initials BC

PT-WI-SR-001 effective 11/8/18

FedEx Express

J233023051201av

Part # 156297-435 RRDW2 EXP 01/25

TUE - 28 MAY 10:30A
PRIORITY OVERNIGHT

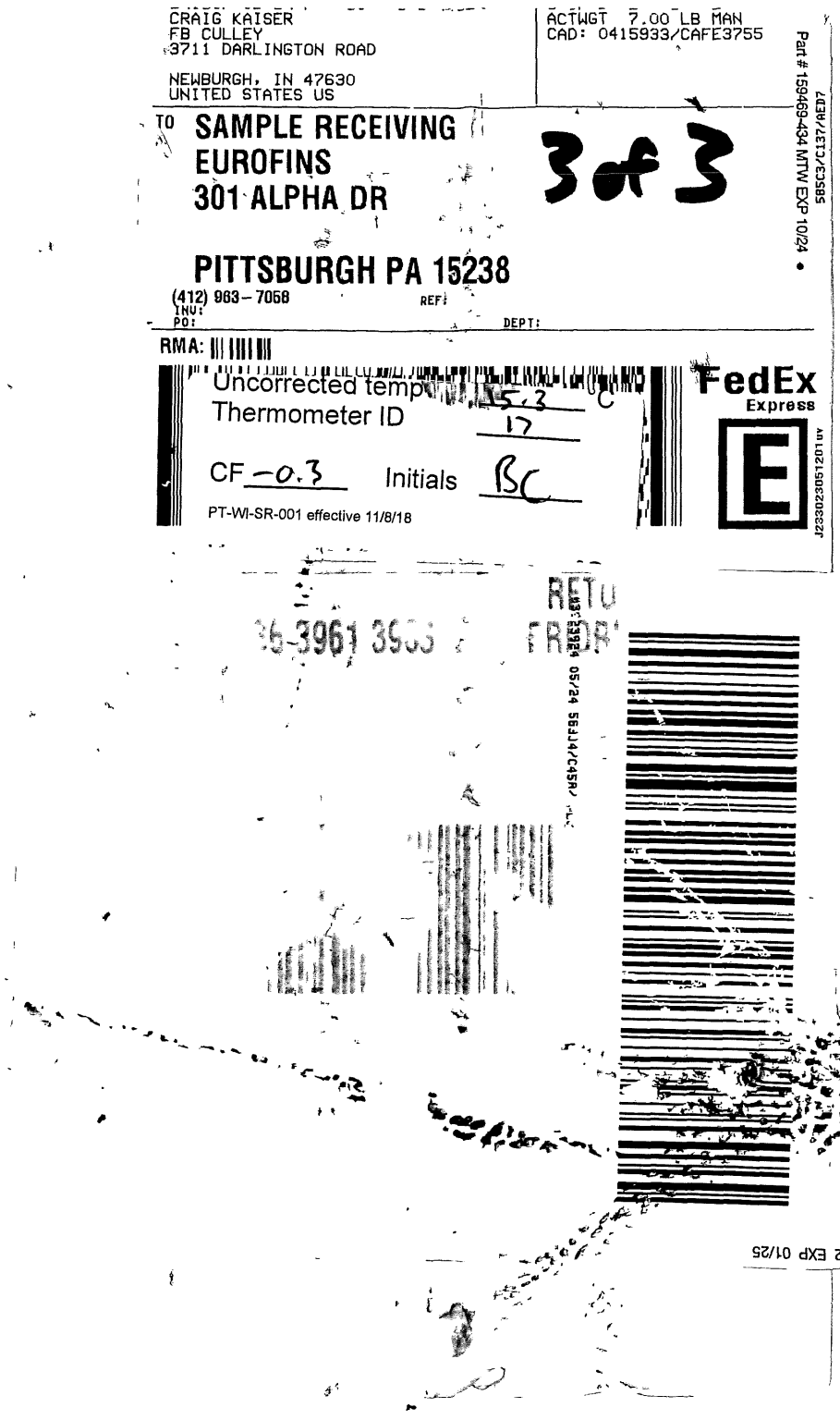
15238
PIT
PA-US

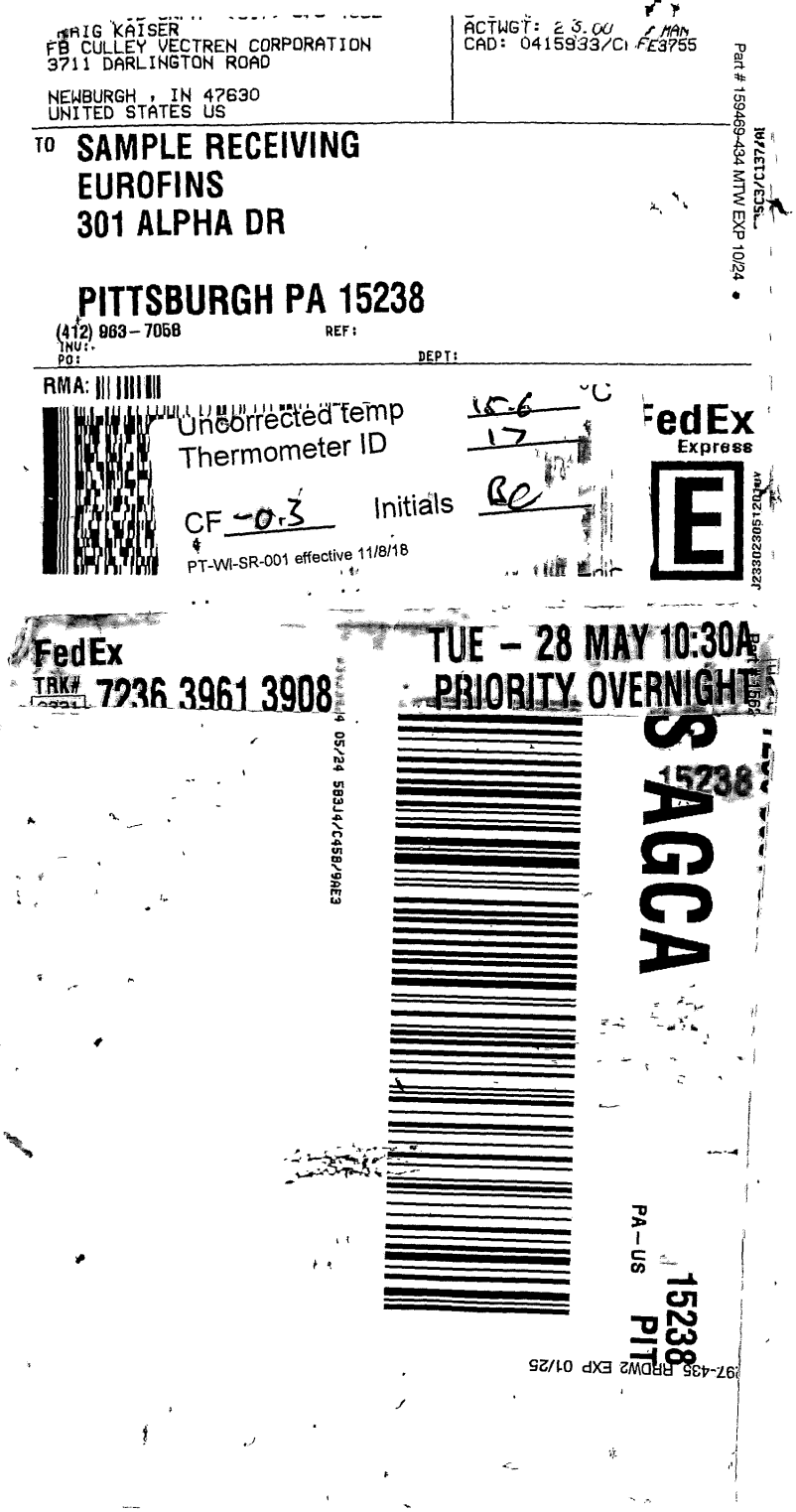
TS AGCA

FedEx
TRK# 7236 3961 3919
0221

#3923924 05/24 583J4/C458/9AE3

180-174632 Waybill


CRAIG KAISER
FB CULLEY
3711 DARLINGTON ROAD
NEWBURGH, IN 47630
UNITED STATES US
ACTWGT 7.00 LB MAN
CAD: 0415933/CAFE3755
Part # 159469-434 MTW EXP 10/24
585C/C137/AE07
TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR
PITTSBURGH PA 15238
(412) 963-7058
REF:
INV:
PO:
DEPT:
3 of 3
RMA:
Uncorrected temp
Thermometer ID
5.3
17
CF -0.3
Initials BC
PT-WI-SR-001 effective 11/8/18
FedEx
Express
J233020051201un
RETU
FRDR
05/24 5EJJ4/C45R/
FedEx
TRK# 0221 7236 3961 3963
TS AGCA
TUE
PRIORITY
PIT
EXP 01/25


ORIG KAISER
FB CULLEY VECTREN CORPORATION
3711 DARLINGTON ROAD
NEWBURGH , IN 47630
UNITED STATES US
ACTWGT: 23.00 LBS MAN
CAD: 0415933/CI FE3755
TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR
PITTSBURGH PA 15238
(412) 963-7058
INV:
PO:
REF:
DEPT:
RMA:
Uncorrected temp
Thermometer ID
CF -0.3
Initials
PT-WI-SR-001 effective 11/8/18
FedEx
Express
FedEx
TRK# 7236 3961 3908
TUE - 28 MAY 10:30A
PRIORITY OVERNIGHT
15238
PA-US
PIT
15238
Part # 159469-434 MTW EXP 10/24
05/24 5831/1458/96E3

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-515975.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 180-174632-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 7/1/2024			Preservation Codes: -
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR Groundwater Monitoring FB Culley West	Project #: 18016014			Other:
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WAP-4I (180-174632-1)	5/22/24	15:15 Eastern		Water			X	X	X	2	
WAP-4D (180-174632-2)	5/22/24	14:00 Eastern		Water			X	X	X	2	
WAP-6I (180-174632-3)	5/23/24	11:54 Eastern		Water			X	X	X	2	
WAP-6D (180-174632-4)	5/23/24	13:47 Eastern		Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	5-30-24 1700	ETAST	Richard Thornley	MAY 31 2024 0910	ETAST L
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-515826.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note):		Job #: 180-174632-1
Address: 180 S. Van Buren Avenue,	Due Date Requested: 7/1/2024	Analysis Requested		Preservation Codes:
City: Barberton	TAT Requested (days):			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:			
Email:	WO #:			
Project Name: CCR Groundwater Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			Other:

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D/3005A (MOD) Boron by 6010D	6020B/3005A (MOD) CCR Metals by 6020B	Total Number of containers	Special Instructions/Note:
			Preservation Code:							M058
WAP-4I (180-174632-1)	5/22/24	15:15 Eastern		Water			X	X	1	
WAP-4D (180-174632-2)	5/22/24	14:00 Eastern		Water			X	X	1	
WAP-6I (180-174632-3)	5/23/24	11.54 Eastern		Water			X	X	1	
WAP-6D (180-174632-4)	5/23/24	13:47 Eastern		Water			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5-28-24 1700	ET Phoenix		5-29-24 1035	EC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	*Relinquished by:*	*Date/Time:*	*Company*	*Received by:*	*Date/Time:*	*Company*

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :**
Barberton Facility

Client E. Pittsburgh Site Name

Cooler Received on 5-29-24 Opened on 5-29-24

Cooler unpacked by:

FedEx: 1st Grd (Exp) UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other

Packing material used. Bubble Wrap Foam (Plastic Bag) None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water (None)

1 Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 17 (CF 0.2 °C) Observed Cooler Temp. 18.0 °C Corrected Cooler Temp. 18.2 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3 Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4 Did custody papers accompany the sample(s)?	(Yes)	No
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	(No)
7 Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?	(Y)	(N)
10 Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11 Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	(Yes)	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA
14 Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this	Yes	No NA
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	No
17 Was a LL Hg or Me Hg trip blank present?	Yes	No

pH Strip Lot# HC339814

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired

Sample(s) were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory

Time preserved Preservative(s) added/Lot number(s)

VOA Sample Preservation - Date/Time VOAs Frozen

Login # : _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form			
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 17	0.5	2.0	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.8	2.0	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
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EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
☐ See Temperature Excursion Form			

Do not lift using this tag.

ORIGIN ID AGCA (412) 963-7530
SAMPLE RECEIVING DEPARTMENT
EUROFINS ENVIRO TESTING PITT N E
301 ALPHA DRIVE

PITTSBURGH, PA 152382907
UNITED STATES US

SHIP DATE 28MAY24
ACTWGT 20.00 LB MAN
CAD 0522321/CAFE3808

BILL SENDER

TO SHIPPING/RECEIVING
EUROFINS ENVIRONMENT TESTING NORTH
180 S. VAN BUREN AVENUE

BARBERTON OH 44203
(330) 497-9396
PO: YES
REF: 8180-102860

Part # 159469-22MM Rev Date 25Sep2023

FedEx Express

J24102311220lva

2 of 2
MPS# 0263 7224 1467 0081
Mstr# 7224 1467 0070

WED - 29 MAY 10:30A
PRIORITY OVERNIGHT

0201

64 CAKA

44203
OH-US CLE

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-174632-1
SDG Number: FB Culley West

Login Number: 174632
List Number: 1
Creator: Mullins, Plumm A

List Source: Eurofins Pittsburgh

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.	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.	False	
COC is filled out in ink and legible.	N/A	
COC is filled out with all pertinent information.	N/A	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	N/A	
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.	True	
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: 180-174632-1
SDG Number: FB Culley West

Login Number: 174632
List Number: 3
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 05/31/24 12:15 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.	N/A	
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.	True	
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	

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11 12 13

ANALYTICAL REPORT

PREPARED FOR

Attn: Todd Plating
Haley & Aldrich, Inc.
400 Augusta Street
Suite 100
Greenville, South Carolina 29601

Generated 12/19/2024 4:18:00 PM

JOB DESCRIPTION

CCR Groundwater Monitoring FB Culley West
FB Culley West

JOB NUMBER

180-182735-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

my EOL

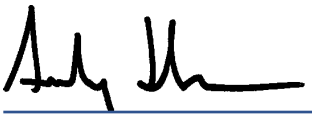
Job Notes

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



Generated
12/19/2024 4:18:00 PM

Authorized for release by
Andy Johnson, Senior Project Manager
Andy.Johnson@et.eurofinsus.com
(615)818-9567

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Job ID: 180-182735-1 Eurofins Pittsburgh

Job Narrative
180-182735-1

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 11/14/2024 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 1.0°C, 1.1°C, 1.3°C, 2.3°C and 2.5°C.

Gas Flow Proportional Counter
Method 9320_Ra228: Radium-228 prep batch 160-689749: The MDC for the following sample(s) is flagged as failing; The laboratory considers the detection goal (requested limit) met when rounding to the appropriate place value. WAP-5S (180-182735-7)

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

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

Job ID: 180-182735-2 Eurofins Pittsburgh

Job Narrative
180-182735-2

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 11/14/2024 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 1.0°C, 1.1°C, 1.3°C, 2.3°C and 2.5°C.

HPLC/IC
Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: WAP-2RR (180-182735-1), WAP-3S (180-182735-2), WAP-3D (180-182735-3), WAP-7S (180-182735-12), WAP-7D (180-182735-13) and DUP-1 (180-182735-14). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 180-484597 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Chloride and Sulfate in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method 9056A_ORGFM_28D: The following sample was diluted to bring the concentration of target analytes within the calibration range: WAP-5S (180-182735-7). Elevated reporting limits (RLs) are provided.

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

Metals
Method 6020B - Total Recoverable: The laboratory control sample (LCS) for preparation batch 240-636024 and analytical batch 240-636305 recovered outside control limits for the following analytes: Thallium. These analytes were biased high in the LCS and were below the reporting limit in the associated samples; therefore, the data have been reported.

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.

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-28-25
California	State	2891	04-30-24 *
Connecticut	State	PH-0688	09-30-24 *
Florida	NELAP	E871008	06-30-25
Georgia	State	PA 02-00416	04-30-25
Illinois	NELAP	004375	07-31-25
Kansas	NELAP	E-10350	01-31-25
Kentucky (UST)	State	162013	04-30-25
Kentucky (WW)	State	KY98043	12-31-24
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-25
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-24
New Hampshire	NELAP	2030	04-04-25
New Jersey	NELAP	PA005	06-30-25
New York	NELAP	11182	04-01-25
North Carolina (WW/SW)	State	434	12-31-24
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-25
Pennsylvania	NELAP	02-00416	04-30-25
Rhode Island	State	LAO00362	01-01-25
South Carolina	State	89014	04-30-25
Texas	NELAP	T104704528	03-31-25
US Fish & Wildlife	US Federal Programs	058448	04-30-25
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462024-14	05-31-25
Virginia	NELAP	10043	07-14-24 *
West Virginia DEP	State	142	01-31-25
Wisconsin	State	998027800	08-31-25

Laboratory: Eurofins Cleveland

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
USDA	US Federal Programs	P330-18-00281	01-05-27

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

Eurofins Pittsburgh

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 180-182735-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Laboratory: Eurofins Cleveland (Continued)

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

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-24

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-08-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-25
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-25
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	12-31-24
Oklahoma	NELAP	9997	12-31-24
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

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

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-182735-1	WAP-2RR	Water	11/13/24 12:30	11/14/24 09:10
180-182735-2	WAP-3S	Water	11/13/24 10:05	11/14/24 09:10
180-182735-3	WAP-3D	Water	11/13/24 08:55	11/14/24 09:10
180-182735-4	WAP-4S	Water	11/12/24 15:30	11/14/24 09:10
180-182735-5	WAP-4I	Water	11/12/24 14:50	11/14/24 09:10
180-182735-6	WAP-4D	Water	11/12/24 14:20	11/14/24 09:10
180-182735-7	WAP-5S	Water	11/12/24 12:50	11/14/24 09:10
180-182735-8	WAP-5I	Water	11/12/24 11:25	11/14/24 09:10
180-182735-9	WAP-5D	Water	11/12/24 10:28	11/14/24 09:10
180-182735-10	WAP-6I	Water	11/13/24 06:30	11/14/24 09:10
180-182735-11	WAP-6D	Water	11/13/24 08:05	11/14/24 09:10
180-182735-12	WAP-7S	Water	11/13/24 11:00	11/14/24 09:10
180-182735-13	WAP-7D	Water	11/13/24 11:40	11/14/24 09:10
180-182735-14	DUP-1	Water	11/12/24 00:00	11/14/24 09:10
180-182735-15	DUP-2	Water	11/13/24 00:00	11/14/24 09:10
180-182735-16	FIELD BLANK	Water	11/12/24 12:20	11/14/24 09:10

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Client Sample ID: WAP-2RR

Date Collected: 11/13/24 12:30
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		2	1 mL	1 mL	484626	11/18/24 15:15	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:09	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:39	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:26	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:29	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 11:03	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1003.63 mL	1.0 g	689592	11/20/24 09:57	BCE	EET SL
Total/NA	Analysis	9315		1			693487	12/13/24 14:14	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1003.63 mL	1.0 g	689594	11/20/24 10:00	BCE	EET SL
Total/NA	Analysis	9320		1			692135	12/06/24 14:09	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 08:59	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-3S

Date Collected: 11/13/24 10:05
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		2	1 mL	1 mL	484626	11/18/24 16:03	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:14	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:42	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:29	AJC	EET CLE
	Instrument ID: I14									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Client Sample ID: WAP-3S

Date Collected: 11/13/24 10:05
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:31	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484994	11/21/24 08:25	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1006.01 mL	1.0 g	689592	11/20/24 09:57	BCE	EET SL
Total/NA	Analysis	9315		1			693487	12/13/24 14:14	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1006.01 mL	1.0 g	689594	11/20/24 10:00	BCE	EET SL
Total/NA	Analysis	9320		1			692135	12/06/24 14:09	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 08:59	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-3D

Date Collected: 11/13/24 08:55
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484626	11/18/24 16:17	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	484626	11/18/24 16:32	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:26	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:45	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:32	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:32	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 11:18	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1009.27 mL	1.0 g	689592	11/20/24 09:57	BCE	EET SL
Total/NA	Analysis	9315		1			693487	12/13/24 16:28	FLC	EET SL
	Instrument ID: GFPCPURPLE									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Client Sample ID: WAP-3D

Date Collected: 11/13/24 08:55
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			1009.27 mL	1.0 g	689594	11/20/24 10:00	BCE	EET SL
Total/NA	Analysis	9320		1			692135	12/06/24 14:09	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 08:59	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-4S

Date Collected: 11/12/24 15:30
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	485325	11/26/24 17:30	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		10	1 mL	1 mL	485325	11/26/24 17:45	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	485686	12/04/24 01:30	M1D	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		5			636324	11/22/24 07:14	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:48	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:35	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:37	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 11:13	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			997.24 mL	1.0 g	689592	11/20/24 09:57	BCE	EET SL
Total/NA	Analysis	9315		1			693487	12/13/24 16:28	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			997.24 mL	1.0 g	689594	11/20/24 10:00	BCE	EET SL
Total/NA	Analysis	9320		1			692135	12/06/24 14:09	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 08:59	FLC	EET SL
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Client Sample ID: WAP-4I

Date Collected: 11/12/24 14:50
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484597	11/18/24 20:13	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:35	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:51	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:37	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:39	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 10:16	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1004.40 mL	1.0 g	689748	11/21/24 08:47	BCE	EET SL
Total/NA	Analysis	9315		1			693486	12/13/24 07:45	FLC	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1004.40 mL	1.0 g	689749	11/21/24 08:51	BCE	EET SL
Total/NA	Analysis	9320		1			692652	12/09/24 13:54	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 08:59	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-4D

Date Collected: 11/12/24 14:20
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484597	11/18/24 17:45	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:39	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:53	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:40	AJC	EET CLE
	Instrument ID: I14									

Client Sample ID: WAP-4D
Lab Sample ID: 180-182735-6

Date Collected: 11/12/24 14:20
Matrix: Water
Date Received: 11/14/24 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:41	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484994	11/21/24 08:34	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			997.24 mL	1.0 g	689748	11/21/24 08:47	BCE	EET SL
Total/NA	Analysis	9315		1			693486	12/13/24 07:46	FLC	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			997.24 mL	1.0 g	689749	11/21/24 08:51	BCE	EET SL
Total/NA	Analysis	9320		1			692652	12/09/24 13:54	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 08:59	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-5S
Lab Sample ID: 180-182735-7

Date Collected: 11/12/24 12:50
Matrix: Water
Date Received: 11/14/24 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	484846	11/21/24 10:33	M1D	EET PIT
	Instrument ID: INTEGRION									
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484597	11/18/24 19:02	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:43	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:56	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:48	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:42	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 10:49	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484481	11/15/24 10:42	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			994.28 mL	1.0 g	689748	11/21/24 08:47	BCE	EET SL
Total/NA	Analysis	9315		1			693486	12/13/24 07:46	FLC	EET SL
	Instrument ID: GFPCBLUE									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Client Sample ID: WAP-5S
Date Collected: 11/12/24 12:50
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			994.28 mL	1.0 g	689749	11/21/24 08:51	BCE	EET SL
Total/NA	Analysis	9320		1			692652	12/09/24 13:54	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 08:59	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-5I
Date Collected: 11/12/24 11:25
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484597	11/18/24 14:31	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 04:23	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:09	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:17	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 10:06	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1004.31 mL	1.0 g	689748	11/21/24 08:47	BCE	EET SL
Total/NA	Analysis	9315		1			693486	12/13/24 07:46	FLC	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1004.31 mL	1.0 g	689749	11/21/24 08:51	BCE	EET SL
Total/NA	Analysis	9320		1			692652	12/09/24 13:54	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 08:59	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-5D
Date Collected: 11/12/24 10:28
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484597	11/18/24 16:58	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:48	RKT	EET CLE
	Instrument ID: I12									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Client Sample ID: WAP-5D

Date Collected: 11/12/24 10:28
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 19:05	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:51	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:44	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 09:41	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1007.08 mL	1.0 g	689748	11/21/24 08:47	BCE	EET SL
Total/NA	Analysis	9315		1			693486	12/13/24 07:46	FLC	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1007.08 mL	1.0 g	689749	11/21/24 08:51	BCE	EET SL
Total/NA	Analysis	9320		1			692652	12/09/24 13:55	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 08:59	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-6I

Date Collected: 11/13/24 06:30
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484626	11/18/24 16:50	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:52	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 19:07	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:54	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:46	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 10:40	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484482	11/15/24 10:48	EBA	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-6I
Lab Sample ID: 180-182735-10

Date Collected: 11/13/24 06:30
Matrix: Water
Date Received: 11/14/24 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			999.16 mL	1.0 g	689750	11/21/24 08:53	BCE	EET SL
Total/NA	Analysis	9315		1			693691	12/14/24 07:20	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.16 mL	1.0 g	689751	11/21/24 09:04	BCE	EET SL
Total/NA	Analysis	9320		1			692927	12/10/24 12:41	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 09:00	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-6D
Lab Sample ID: 180-182735-11

Date Collected: 11/13/24 08:05
Matrix: Water
Date Received: 11/14/24 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484626	11/18/24 17:05	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:56	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 19:10	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:56	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:48	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 10:45	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484514	11/15/24 13:24	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			994.50 mL	1.0 g	689750	11/21/24 08:53	BCE	EET SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	693691	12/14/24 07:20	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			994.50 mL	1.0 g	689751	11/21/24 09:04	BCE	EET SL
Total/NA	Analysis	9320		1			692927	12/10/24 12:42	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 09:00	FLC	EET SL
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Client Sample ID: WAP-7S

Date Collected: 11/13/24 11:00
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484626	11/18/24 17:19	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	484626	11/18/24 17:37	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		5			636324	11/22/24 07:31	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 19:13	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:59	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:49	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 09:46	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484481	11/15/24 10:42	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			992.76 mL	1.0 g	689750	11/21/24 08:53	BCE	EET SL
Total/NA	Analysis	9315		1			693692	12/14/24 07:17	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			992.76 mL	1.0 g	689751	11/21/24 09:04	BCE	EET SL
Total/NA	Analysis	9320		1			692927	12/10/24 12:42	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 09:00	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-7D

Date Collected: 11/13/24 11:40
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484626	11/18/24 17:52	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		10	1 mL	1 mL	484626	11/18/24 18:07	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 06:05	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 19:16	AJC	EET CLE
	Instrument ID: I14									

Client Sample ID: WAP-7D
Date Collected: 11/13/24 11:40
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 04:02	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:51	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 09:51	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1002.25 mL	1.0 g	689750	11/21/24 08:53	BCE	EET SL
Total/NA	Analysis	9315		1			693692	12/14/24 07:17	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1002.25 mL	1.0 g	689751	11/21/24 09:04	BCE	EET SL
Total/NA	Analysis	9320		1			692927	12/10/24 12:42	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 09:00	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-1
Date Collected: 11/12/24 00:00
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484626	11/18/24 18:22	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	484626	11/18/24 19:09	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 06:18	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 19:18	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 04:04	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:53	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 09:36	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-1
Lab Sample ID: 180-182735-14
Date Collected: 11/12/24 00:00
Matrix: Water
Date Received: 11/14/24 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			988.35 mL	1.0 g	689750	11/21/24 08:53	BCE	EET SL
Total/NA	Analysis	9315		1			693692	12/14/24 07:17	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			988.35 mL	1.0 g	689751	11/21/24 09:04	BCE	EET SL
Total/NA	Analysis	9320		1			692927	12/10/24 12:42	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 09:00	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-2
Lab Sample ID: 180-182735-15
Date Collected: 11/13/24 00:00
Matrix: Water
Date Received: 11/14/24 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484626	11/18/24 19:24	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 06:22	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 19:21	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 04:07	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:58	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 09:27	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484482	11/15/24 10:48	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1007.93 mL	1.0 g	689750	11/21/24 08:53	BCE	EET SL
Total/NA	Analysis	9315		1			693692	12/14/24 07:17	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1007.93 mL	1.0 g	689751	11/21/24 09:04	BCE	EET SL
Total/NA	Analysis	9320		1			692927	12/10/24 12:42	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 09:00	FLC	EET SL
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Client Sample ID: FIELD BLANK

Date Collected: 11/12/24 12:20
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484597	11/18/24 17:09	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 06:26	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 19:24	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 04:10	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 11:00	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			486092	12/06/24 12:56	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			996.00 mL	1.0 g	689750	11/21/24 08:53	BCE	EET SL
Total/NA	Analysis	9315		1	1.0 mL	1.0 mL	693692	12/14/24 07:17	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			996.00 mL	1.0 g	689751	11/21/24 09:04	BCE	EET SL
Total/NA	Analysis	9320		1			692927	12/10/24 12:42	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694340	12/18/24 09:00	FLC	EET SL
	Instrument ID: NOEQUIP									

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Analyst References:

Lab: EET CLE
- Batch Type: Prep
  - BN = Benjamin Norman
- Batch Type: Analysis
  - AJC = Alexander Colosi
  - RKT = Roger Toth
  - TQ6W = Bryan Perelka

Lab: EET PIT
- Batch Type: Analysis
  - BAB = Brooke Batyi
  - EBA = Elizabeth Arbster
  - ERP = Evan Papak
  - M1D = Maureen Donlin

Lab: EET SL
- Batch Type: Prep
  - BCE = Benjamin Celeslie
- Batch Type: Analysis
  - FLC = Fernando Cruz
  - SCB = Sarah Bernsen

Client Sample ID: WAP-2RR

Date Collected: 11/13/24 12:30
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-1

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44		2.0	1.4	mg/L			11/18/24 15:15	2
Fluoride	0.29		0.20	0.052	mg/L			11/18/24 15:15	2
Sulfate	79		2.0	1.5	mg/L			11/18/24 15:15	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.0		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:09	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:39	1
Arsenic	0.0016	J	0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:39	1
Barium	0.057		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:39	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:39	1
Cadmium	0.00028	J	0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:39	1
Calcium	110		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:39	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:39	1
Cobalt	0.0013		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:39	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:26	1
Lithium	0.019		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:39	1
Molybdenum	0.080		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:39	1
Selenium	0.0040	J	0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:39	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:39	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	520		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	6.7	HF	0.1	0.1	SU			11/16/24 11:03	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.178		0.110	0.112	1.00	0.150	pCi/L	11/20/24 09:57	12/13/24 14:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.6*		*30 - 110*	*11/20/24 09:57*	*12/13/24 14:14*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0490	U	0.458	0.458	1.00	0.846	pCi/L	11/20/24 10:00	12/06/24 14:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.6*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Client Sample ID: WAP-2RR
Lab Sample ID: 180-182735-1

Date Collected: 11/13/24 12:30
Matrix: Water
Date Received: 11/14/24 09:10

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*84.1*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.227	U	0.471	0.471	5.00	0.846	pCi/L		12/18/24 08:59	1

Client Sample ID: WAP-3S

Date Collected: 11/13/24 10:05
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-2

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**37**		2.0	1.4	mg/L			11/18/24 16:03	2
Fluoride	**0.42**		0.20	0.052	mg/L			11/18/24 16:03	2
Sulfate	**130**		2.0	1.5	mg/L			11/18/24 16:03	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.5**		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:14	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:42	1
Arsenic	ND		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:42	1
Barium	**0.037**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:42	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:42	1
Cadmium	**0.00012**	**J**	0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:42	1
Calcium	**95**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:42	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:42	1
Cobalt	**0.00078**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:42	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:29	1
Lithium	**0.10**		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:42	1
Molybdenum	**0.46**		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:42	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:42	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:42	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**430**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.8**	**HF**	0.1	0.1	SU			11/21/24 08:25	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0899	U	0.0804	0.0808	1.00	0.123	pCi/L	11/20/24 09:57	12/13/24 14:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.7*		*30 - 110*	*11/20/24 09:57*	*12/13/24 14:14*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0326	U	0.399	0.399	1.00	0.730	pCi/L	11/20/24 10:00	12/06/24 14:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.7*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Client Sample ID: WAP-3S
Date Collected: 11/13/24 10:05
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-2
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*82.2*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.122	U	0.407	0.407	5.00	0.730	pCi/L		12/18/24 08:59	1

Client Sample ID: WAP-3D

Date Collected: 11/13/24 08:55
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-3

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**43**		1.0	0.71	mg/L			11/18/24 16:17	1
Fluoride	**0.28**		0.10	0.026	mg/L			11/18/24 16:17	1
Sulfate	**230**		5.0	3.8	mg/L			11/18/24 16:32	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**4.0**		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:26	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:45	1
Arsenic	ND		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:45	1
Barium	**0.015**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:45	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:45	1
Cadmium	**0.00058**	**J**	0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:45	1
Calcium	**120**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:45	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:45	1
Cobalt	**0.00099**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:45	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:32	1
Lithium	**0.075**		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:45	1
Molybdenum	**0.25**		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:45	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:45	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:45	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**620**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.6**	**HF**	0.1	0.1	SU			11/16/24 11:18	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0966	U	0.0855	0.0859	1.00	0.130	pCi/L	11/20/24 09:57	12/13/24 16:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.3*		*30 - 110*	*11/20/24 09:57*	*12/13/24 16:28*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.400	U	0.425	0.427	1.00	0.688	pCi/L	11/20/24 10:00	12/06/24 14:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.3*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Client Sample ID: WAP-3D
Date Collected: 11/13/24 08:55
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-3
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*76.3*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.497	U	0.434	0.436	5.00	0.688	pCi/L		12/18/24 08:59	1

Client Sample ID: WAP-4S

Date Collected: 11/12/24 15:30
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-4

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**110**		1.0	0.71	mg/L			11/26/24 17:30	1
Fluoride	**0.25**		0.10	0.026	mg/L			12/04/24 01:30	1
Sulfate	**400**		10	7.6	mg/L			11/26/24 17:45	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**12**		0.50	0.29	mg/L		11/20/24 14:00	11/22/24 07:14	5

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:48	1
Arsenic	**0.0061**		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:48	1
Barium	**0.044**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:48	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:48	1
Cadmium	**0.00011**	**J**	0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:48	1
Calcium	**230**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:48	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:48	1
Cobalt	**0.0015**		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:48	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:35	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:48	1
Molybdenum	**0.45**		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:48	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:48	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:48	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1100**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.3**	**HF**	0.1	0.1	SU			11/16/24 11:13	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0821	U	0.0854	0.0857	1.00	0.136	pCi/L	11/20/24 09:57	12/13/24 16:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.0*		*30 - 110*	*11/20/24 09:57*	*12/13/24 16:28*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.149	U	0.463	0.463	1.00	0.821	pCi/L	11/20/24 10:00	12/06/24 14:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.0*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Client Sample ID: WAP-4S
Date Collected: 11/12/24 15:30
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-4
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*84.9*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.231	U	0.471	0.471	5.00	0.821	pCi/L		12/18/24 08:59	1

Client Sample ID: WAP-4I
Date Collected: 11/12/24 14:50
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-5
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36**		1.0	0.71	mg/L			11/18/24 20:13	1
Fluoride	**0.14**		0.10	0.026	mg/L			11/18/24 20:13	1
Sulfate	**60**		1.0	0.76	mg/L			11/18/24 20:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.10**		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:35	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:51	1
Arsenic	**0.0046**	**J**	0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:51	1
Barium	**0.20**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:51	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:51	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:51	1
Calcium	**47**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:51	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:51	1
Cobalt	**0.00049**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:51	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:37	1
Lithium	**0.0048**	**J**	0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:51	1
Molybdenum	**0.0027**	**J**	0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:51	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:51	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:51	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**260**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.3**	**HF**	0.1	0.1	SU			11/16/24 10:16	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.378**		0.147	0.151	1.00	0.161	pCi/L	11/21/24 08:47	12/13/24 07:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.4*		*30 - 110*	*11/21/24 08:47*	*12/13/24 07:45*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.338	U	0.363	0.364	1.00	0.588	pCi/L	11/21/24 08:51	12/09/24 13:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.4*		*30 - 110*	*11/21/24 08:51*	*12/09/24 13:54*	*1*

Client Sample ID: WAP-4I
Date Collected: 11/12/24 14:50
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-5
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	85.2		30 - 110	11/21/24 08:51	12/09/24 13:54	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.716		0.392	0.394	5.00	0.588	pCi/L		12/18/24 08:59	1

Client Sample ID: WAP-4D

Date Collected: 11/12/24 14:20
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-6

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21**		1.0	0.71	mg/L			11/18/24 17:45	1
Fluoride	**0.13**		0.10	0.026	mg/L			11/18/24 17:45	1
Sulfate	**22**		1.0	0.76	mg/L			11/18/24 17:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:39	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:53	1
Arsenic	**0.0083**		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:53	1
Barium	**0.27**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:53	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:53	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:53	1
Calcium	**44**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:53	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:53	1
Cobalt	**0.00018**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:53	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:40	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:53	1
Molybdenum	**0.0049**	**J**	0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:53	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:53	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:53	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**230**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.6**	**HF**	0.1	0.1	SU			11/21/24 08:34	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.225**		0.127	0.129	1.00	0.167	pCi/L	11/21/24 08:47	12/13/24 07:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.3*		*30 - 110*	*11/21/24 08:47*	*12/13/24 07:46*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.235	U	0.443	0.444	1.00	0.767	pCi/L	11/21/24 08:51	12/09/24 13:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*89.3*		*30 - 110*	*11/21/24 08:51*	*12/09/24 13:54*	*1*

Client Sample ID: WAP-4D
Lab Sample ID: 180-182735-6

Date Collected: 11/12/24 14:20
Matrix: Water
Date Received: 11/14/24 09:10

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*73.3*		*30 - 110*	*11/21/24 08:51*	*12/09/24 13:54*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.460	U	0.461	0.462	5.00	0.767	pCi/L		12/18/24 08:59	1

Client Sample ID: WAP-5S

Date Collected: 11/12/24 12:50
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-7

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**71**		1.0	0.71	mg/L			11/18/24 19:02	1
Fluoride	**0.084**	**J**	0.10	0.026	mg/L			11/18/24 19:02	1
Sulfate	**580**		5.0	3.8	mg/L			11/21/24 10:33	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**6.6**		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:43	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:56	1
Arsenic	**0.00086**	**J**	0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:56	1
Barium	**0.046**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:56	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:56	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:56	1
Calcium	**230**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:56	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:56	1
Cobalt	**0.0065**		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:56	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:48	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:56	1
Molybdenum	ND		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:56	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:56	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:56	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1200**		10	10	mg/L			11/15/24 10:42	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**6.8**	**HF**	0.1	0.1	SU			11/16/24 10:49	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0421	U	0.0776	0.0777	1.00	0.177	pCi/L	11/21/24 08:47	12/13/24 07:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.8*		*30 - 110*	*11/21/24 08:47*	*12/13/24 07:46*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0454	U G	0.556	0.556	1.00	1.02	pCi/L	11/21/24 08:51	12/09/24 13:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.8*		*30 - 110*	*11/21/24 08:51*	*12/09/24 13:54*	*1*

Client Sample ID: WAP-5S
Date Collected: 11/12/24 12:50
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-7
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*61.3*		*30 - 110*	*11/21/24 08:51*	*12/09/24 13:54*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.00334	U	0.561	0.561	5.00	1.02	pCi/L		12/18/24 08:59	1

Client Sample ID: WAP-5I

Date Collected: 11/12/24 11:25
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-8

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**34**		1.0	0.71	mg/L			11/18/24 14:31	1
Fluoride	**0.13**		0.10	0.026	mg/L			11/18/24 14:31	1
Sulfate	**63**		1.0	0.76	mg/L			11/18/24 14:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.087**	**J**	0.10	0.057	mg/L		11/20/24 14:00	11/22/24 04:23	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:09	1
Arsenic	**0.0091**		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:09	1
Barium	**0.14**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:09	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:09	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:09	1
Calcium	**49**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:09	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:09	1
Cobalt	**0.00047**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:09	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/21/24 18:09	1
Lithium	**0.0051**	**J**	0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:09	1
Molybdenum	**0.0019**	**J**	0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:09	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:09	1
Thallium	ND	F1 *+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:09	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**270**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.3**	**HF**	0.1	0.1	SU			11/16/24 10:06	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.286**		0.144	0.147	1.00	0.183	pCi/L	11/21/24 08:47	12/13/24 07:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.5*		*30 - 110*	*11/21/24 08:47*	*12/13/24 07:46*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.485	U	0.505	0.507	1.00	0.817	pCi/L	11/21/24 08:51	12/09/24 13:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*84.5*		*30 - 110*	*11/21/24 08:51*	*12/09/24 13:54*	*1*

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Client Sample ID: WAP-5I
Date Collected: 11/12/24 11:25
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-8
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	69.9		30 - 110	11/21/24 08:51	12/09/24 13:54	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.771	U	0.525	0.528	5.00	0.817	pCi/L		12/18/24 08:59	1

Client Sample ID: WAP-5D

Date Collected: 11/12/24 10:28
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-9

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21**		1.0	0.71	mg/L			11/18/24 16:58	1
Fluoride	**0.13**		0.10	0.026	mg/L			11/18/24 16:58	1
Sulfate	**39**		1.0	0.76	mg/L			11/18/24 16:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:48	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 19:05	1
Arsenic	**0.0088**		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 19:05	1
Barium	**0.19**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 19:05	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 19:05	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 19:05	1
Calcium	**42**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 19:05	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 19:05	1
Cobalt	ND		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 19:05	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:51	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 19:05	1
Molybdenum	**0.0033**	**J**	0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 19:05	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 19:05	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 19:05	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**210**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.3**	**HF**	0.1	0.1	SU			11/16/24 09:41	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.397**		0.142	0.147	1.00	0.140	pCi/L	11/21/24 08:47	12/13/24 07:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.7*		*30 - 110*	*11/21/24 08:47*	*12/13/24 07:46*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0804	U	0.347	0.347	1.00	0.665	pCi/L	11/21/24 08:51	12/09/24 13:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.7*		*30 - 110*	*11/21/24 08:51*	*12/09/24 13:55*	*1*

Client Sample ID: WAP-5D
Lab Sample ID: 180-182735-9

Date Collected: 11/12/24 10:28
Matrix: Water
Date Received: 11/14/24 09:10

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*89.3*		*30 - 110*	*11/21/24 08:51*	*12/09/24 13:55*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.316	U	0.375	0.377	5.00	0.665	pCi/L		12/18/24 08:59	1

Client Sample ID: WAP-6I
Date Collected: 11/13/24 06:30
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-10
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29**		1.0	0.71	mg/L			11/18/24 16:50	1
Fluoride	**0.12**		0.10	0.026	mg/L			11/18/24 16:50	1
Sulfate	**42**		1.0	0.76	mg/L			11/18/24 16:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.10**		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:52	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 19:07	1
Arsenic	**0.012**		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 19:07	1
Barium	**0.22**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 19:07	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 19:07	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 19:07	1
Calcium	**46**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 19:07	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 19:07	1
Cobalt	**0.00045**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 19:07	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:54	1
Lithium	**0.0043**	**J**	0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 19:07	1
Molybdenum	**0.0043**	**J**	0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 19:07	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 19:07	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 19:07	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**240**		10	10	mg/L			11/15/24 10:48	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**	**HF**	0.1	0.1	SU			11/16/24 10:40	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.264**		0.145	0.147	1.00	0.189	pCi/L	11/21/24 08:53	12/14/24 07:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.7*		*30 - 110*	*11/21/24 08:53*	*12/14/24 07:20*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.273	U	0.395	0.395	1.00	0.667	pCi/L	11/21/24 09:04	12/10/24 12:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.7*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:41*	*1*

Client Sample ID: WAP-6I

Date Collected: 11/13/24 06:30
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-10

Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*77.0*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:41*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.537	U	0.421	0.421	5.00	0.667	pCi/L		12/18/24 09:00	1

Client Sample ID: WAP-6D

Date Collected: 11/13/24 08:05
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-11

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21**		1.0	0.71	mg/L			11/18/24 17:05	1
Fluoride	**0.12**		0.10	0.026	mg/L			11/18/24 17:05	1
Sulfate	**36**		1.0	0.76	mg/L			11/18/24 17:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:56	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 19:10	1
Arsenic	**0.0047**	**J**	0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 19:10	1
Barium	**0.17**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 19:10	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 19:10	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 19:10	1
Calcium	**37**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 19:10	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 19:10	1
Cobalt	ND		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 19:10	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:56	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 19:10	1
Molybdenum	**0.0021**	**J**	0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 19:10	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 19:10	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 19:10	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**190**		10	10	mg/L			11/15/24 13:24	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**	**HF**	0.1	0.1	SU			11/16/24 10:45	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.388**		0.165	0.169	1.00	0.206	pCi/L	11/21/24 08:53	12/14/24 07:20	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.9*		*30 - 110*	*11/21/24 08:53*	*12/14/24 07:20*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0709	U	0.314	0.314	1.00	0.567	pCi/L	11/21/24 09:04	12/10/24 12:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.9*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:42*	*1*

Client Sample ID: WAP-6D
Lab Sample ID: 180-182735-11

Date Collected: 11/13/24 08:05
Matrix: Water
Date Received: 11/14/24 09:10

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*87.9*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.459	U	0.355	0.357	5.00	0.567	pCi/L		12/18/24 09:00	1

Client Sample ID: WAP-7S

Date Collected: 11/13/24 11:00
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-12

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	72		1.0	0.71	mg/L			11/18/24 17:19	1
Fluoride	0.097	J	0.10	0.026	mg/L			11/18/24 17:19	1
Sulfate	370		5.0	3.8	mg/L			11/18/24 17:37	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	12		0.50	0.29	mg/L		11/20/24 14:00	11/22/24 07:31	5

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0010	J	0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 19:13	1
Arsenic	0.0076		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 19:13	1
Barium	0.040		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 19:13	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 19:13	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 19:13	1
Calcium	160		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 19:13	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 19:13	1
Cobalt	ND		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 19:13	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:59	1
Lithium	0.20		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 19:13	1
Molybdenum	0.19		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 19:13	1
Selenium	0.00099	J	0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 19:13	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 19:13	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	730		10	10	mg/L			11/15/24 10:42	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	10.2	HF	0.1	0.1	SU			11/16/24 09:46	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.160	U	0.121	0.122	1.00	0.180	pCi/L	11/21/24 08:53	12/14/24 07:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.3*		*30 - 110*	*11/21/24 08:53*	*12/14/24 07:17*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.520	U	0.397	0.399	1.00	0.610	pCi/L	11/21/24 09:04	12/10/24 12:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*87.3*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:42*	*1*

Client Sample ID: WAP-7S

Date Collected: 11/13/24 11:00
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-12

Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	86.0		30 - 110	11/21/24 09:04	12/10/24 12:42	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.680		0.415	0.417	5.00	0.610	pCi/L		12/18/24 09:00	1

Client Sample ID: WAP-7D

Date Collected: 11/13/24 11:40
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-13

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**100**		1.0	0.71	mg/L			11/18/24 17:52	1
Fluoride	**0.31**		0.10	0.026	mg/L			11/18/24 17:52	1
Sulfate	**880**		10	7.6	mg/L			11/18/24 18:07	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**9.3**		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 06:05	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 19:16	1
Arsenic	**0.0013**	**J**	0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 19:16	1
Barium	**0.029**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 19:16	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 19:16	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 19:16	1
Calcium	**330**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 19:16	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 19:16	1
Cobalt	**0.0036**		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 19:16	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 04:02	1
Lithium	**0.056**		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 19:16	1
Molybdenum	**0.18**		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 19:16	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 19:16	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 19:16	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1800**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.2**	**HF**	0.1	0.1	SU			11/16/24 09:51	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.391**		0.152	0.156	1.00	0.174	pCi/L	11/21/24 08:53	12/14/24 07:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*30 - 110*	*11/21/24 08:53*	*12/14/24 07:17*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.676**		0.389	0.394	1.00	0.547	pCi/L	11/21/24 09:04	12/10/24 12:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.6*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:42*	*1*

Client Sample ID: WAP-7D

Date Collected: 11/13/24 11:40
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-13

Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	81.5		30 - 110	11/21/24 09:04	12/10/24 12:42	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.07		0.418	0.424	5.00	0.547	pCi/L		12/18/24 09:00	1

Client Sample ID: DUP-1

Date Collected: 11/12/24 00:00
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-14

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**73**		1.0	0.71	mg/L			11/18/24 18:22	1
Fluoride	**0.23**		0.10	0.026	mg/L			11/18/24 18:22	1
Sulfate	**490**		5.0	3.8	mg/L			11/18/24 19:09	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**5.9**		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 06:18	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 19:18	1
Arsenic	ND		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 19:18	1
Barium	**0.040**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 19:18	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 19:18	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 19:18	1
Calcium	**190**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 19:18	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 19:18	1
Cobalt	**0.0055**		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 19:18	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 04:04	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 19:18	1
Molybdenum	ND		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 19:18	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 19:18	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 19:18	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1200**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**6.7**	**HF**	0.1	0.1	SU			11/16/24 09:36	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.102	U	0.110	0.111	1.00	0.178	pCi/L	11/21/24 08:53	12/14/24 07:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.0*		*30 - 110*	*11/21/24 08:53*	*12/14/24 07:17*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.370	U	0.408	0.410	1.00	0.666	pCi/L	11/21/24 09:04	12/10/24 12:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.0*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:42*	*1*

Client Sample ID: DUP-1
Date Collected: 11/12/24 00:00
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-14
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*78.9*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.471	U	0.423	0.425	5.00	0.666	pCi/L		12/18/24 09:00	1

Client Sample ID: DUP-2

Date Collected: 11/13/24 00:00
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-15

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29		1.0	0.71	mg/L			11/18/24 19:24	1
Fluoride	0.12		0.10	0.026	mg/L			11/18/24 19:24	1
Sulfate	42		1.0	0.76	mg/L			11/18/24 19:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.10		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 06:22	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 19:21	1
Arsenic	0.0068		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 19:21	1
Barium	0.19		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 19:21	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 19:21	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 19:21	1
Calcium	41		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 19:21	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 19:21	1
Cobalt	0.00034	J	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 19:21	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 04:07	1
Lithium	0.0034	J	0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 19:21	1
Molybdenum	0.0037	J	0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 19:21	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 19:21	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 19:21	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	240		10	10	mg/L			11/15/24 10:48	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.4	HF	0.1	0.1	SU			11/16/24 09:27	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.262		0.131	0.133	1.00	0.160	pCi/L	11/21/24 08:53	12/14/24 07:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.0*		*30 - 110*	*11/21/24 08:53*	*12/14/24 07:17*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.261	U	0.445	0.446	1.00	0.761	pCi/L	11/21/24 09:04	12/10/24 12:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.0*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:42*	*1*

Client Sample ID: DUP-2
Lab Sample ID: 180-182735-15

Date Collected: 11/13/24 00:00
Matrix: Water
Date Received: 11/14/24 09:10

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*74.8*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.523	U	0.464	0.465	5.00	0.761	pCi/L		12/18/24 09:00	1

Client Sample ID: FIELD BLANK

Date Collected: 11/12/24 12:20
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182735-16

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**0.78**	**J**	1.0	0.71	mg/L			11/18/24 17:09	1
Fluoride	ND		0.10	0.026	mg/L			11/18/24 17:09	1
Sulfate	ND		1.0	0.76	mg/L			11/18/24 17:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 06:26	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 19:24	1
Arsenic	ND		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 19:24	1
Barium	ND		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 19:24	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 19:24	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 19:24	1
Calcium	ND		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 19:24	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 19:24	1
Cobalt	ND		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 19:24	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 04:10	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 19:24	1
Molybdenum	ND		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 19:24	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 19:24	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 19:24	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 11:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	ND		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**5.5**	**HF**	0.1	0.1	SU			12/06/24 12:56	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0177	U	0.0843	0.0843	1.00	0.179	pCi/L	11/21/24 08:53	12/14/24 07:17	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.5*		*30 - 110*	*11/21/24 08:53*	*12/14/24 07:17*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.103	U	0.329	0.330	1.00	0.651	pCi/L	11/21/24 09:04	12/10/24 12:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.5*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:42*	*1*

Client Sample ID: FIELD BLANK
Lab Sample ID: 180-182735-16

Date Collected: 11/12/24 12:20
Matrix: Water
Date Received: 11/14/24 09:10

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*82.2*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.121	U	0.340	0.341	5.00	0.651	pCi/L		12/18/24 09:00	1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-484597/45
Matrix: Water
Analysis Batch: 484597

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.745	J	1.0	0.71	mg/L			11/18/24 17:57	1
Fluoride	ND		0.10	0.026	mg/L			11/18/24 17:57	1
Sulfate	ND		1.0	0.76	mg/L			11/18/24 17:57	1

Lab Sample ID: MB 180-484597/6
Matrix: Water
Analysis Batch: 484597

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.736	J	1.0	0.71	mg/L			11/18/24 09:59	1
Fluoride	ND		0.10	0.026	mg/L			11/18/24 09:59	1
Sulfate	ND		1.0	0.76	mg/L			11/18/24 09:59	1

Lab Sample ID: LCS 180-484597/46
Matrix: Water
Analysis Batch: 484597

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	53.1		mg/L		106	80 - 120
Fluoride	2.50	2.56		mg/L		103	80 - 120
Sulfate	50.0	46.6		mg/L		93	80 - 120

Lab Sample ID: LCS 180-484597/7
Matrix: Water
Analysis Batch: 484597

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	52.4		mg/L		105	80 - 120
Fluoride	2.50	2.50		mg/L		100	80 - 120
Sulfate	50.0	45.7		mg/L		91	80 - 120

Lab Sample ID: 180-182735-8 MS
Matrix: Water
Analysis Batch: 484597

Client Sample ID: WAP-5I
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	34		50.0	81.8	E	mg/L		96	80 - 120
Fluoride	0.13		2.50	2.81		mg/L		107	80 - 120
Sulfate	63		50.0	122	E	mg/L		118	80 - 120

Lab Sample ID: 180-182735-8 MSD
Matrix: Water
Analysis Batch: 484597

Client Sample ID: WAP-5I
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	34		50.0	81.7	E	mg/L		96	80 - 120	0	15
Fluoride	0.13		2.50	2.81		mg/L		107	80 - 120	0	15
Sulfate	63		50.0	121	E	mg/L		117	80 - 120	0	15

Method: EPA 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 180-484626/6
Matrix: Water
Analysis Batch: 484626

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			11/18/24 12:02	1
Fluoride	ND		0.10	0.026	mg/L			11/18/24 12:02	1
Sulfate	ND		1.0	0.76	mg/L			11/18/24 12:02	1

Lab Sample ID: LCS 180-484626/7
Matrix: Water
Analysis Batch: 484626

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.0		mg/L		96	80 - 120
Fluoride	2.50	2.48		mg/L		99	80 - 120
Sulfate	50.0	46.9		mg/L		94	80 - 120

Lab Sample ID: MB 180-484846/49
Matrix: Water
Analysis Batch: 484846

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			11/21/24 02:49	1
Fluoride	ND		0.10	0.026	mg/L			11/21/24 02:49	1
Sulfate	ND		1.0	0.76	mg/L			11/21/24 02:49	1

Lab Sample ID: LCS 180-484846/50
Matrix: Water
Analysis Batch: 484846

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.8		mg/L		98	80 - 120
Fluoride	2.50	2.49		mg/L		100	80 - 120
Sulfate	50.0	47.9		mg/L		96	80 - 120

Lab Sample ID: MB 180-485325/6
Matrix: Water
Analysis Batch: 485325

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			11/26/24 11:04	1
Fluoride	ND		0.10	0.026	mg/L			11/26/24 11:04	1
Sulfate	ND		1.0	0.76	mg/L			11/26/24 11:04	1

Lab Sample ID: LCS 180-485325/7
Matrix: Water
Analysis Batch: 485325

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.6		mg/L		101	80 - 120
Fluoride	2.50	2.80		mg/L		112	80 - 120
Sulfate	50.0	49.3		mg/L		99	80 - 120

Method: EPA 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 180-485686/35
Matrix: Water
Analysis Batch: 485686

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			12/03/24 22:07	1
Fluoride	ND		0.10	0.026	mg/L			12/03/24 22:07	1
Sulfate	ND		1.0	0.76	mg/L			12/03/24 22:07	1

Lab Sample ID: LCS 180-485686/36
Matrix: Water
Analysis Batch: 485686

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.3		mg/L		101	80 - 120
Fluoride	2.50	2.60		mg/L		104	80 - 120
Sulfate	50.0	50.4		mg/L		101	80 - 120

Method: EPA 6010D - Metals (ICP)

Lab Sample ID: MB 240-636024/1-A
Matrix: Water
Analysis Batch: 636324

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 04:15	1

Lab Sample ID: LCS 240-636024/2-A
Matrix: Water
Analysis Batch: 636324

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	0.991		mg/L		99	80 - 120

Lab Sample ID: 180-182735-8 MS
Matrix: Water
Analysis Batch: 636324

Client Sample ID: WAP-5I
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.087	J	1.00	1.06		mg/L		97	75 - 125

Lab Sample ID: 180-182735-8 MSD
Matrix: Water
Analysis Batch: 636324

Client Sample ID: WAP-5I
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.087	J	1.00	1.10		mg/L		101	75 - 125	3	20

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-636024/1-A
Matrix: Water
Analysis Batch: 636305

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:04	1
Arsenic	ND		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:04	1
Barium	ND		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:04	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:04	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:04	1
Calcium	ND		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:04	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:04	1
Cobalt	ND		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:04	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:04	1
Molybdenum	ND		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:04	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:04	1
Thallium	ND		0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:04	1

Lab Sample ID: MB 240-636024/1-A
Matrix: Water
Analysis Batch: 636847

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 10:07	1

Lab Sample ID: LCS 240-636024/3-A
Matrix: Water
Analysis Batch: 636305

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.100	0.101		mg/L		101	80 - 120
Arsenic	1.00	1.02		mg/L		102	80 - 120
Barium	1.00	0.987		mg/L		99	80 - 120
Beryllium	0.500	0.473		mg/L		95	80 - 120
Cadmium	0.500	0.482		mg/L		96	80 - 120
Calcium	25.0	25.4		mg/L		102	80 - 120
Chromium	0.500	0.489		mg/L		98	80 - 120
Cobalt	0.500	0.486		mg/L		97	80 - 120
Lithium	0.500	0.505		mg/L		101	80 - 120
Molybdenum	0.500	0.488		mg/L		98	80 - 120
Selenium	1.00	1.02		mg/L		102	80 - 120
Thallium	1.00	1.39	*+	mg/L		139	80 - 120

Lab Sample ID: LCS 240-636024/3-A
Matrix: Water
Analysis Batch: 636847

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.500	0.498		mg/L		100	80 - 120

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-182735-8 MS
Matrix: Water
Analysis Batch: 636305

Client Sample ID: WAP-5I
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		0.100	0.102		mg/L		102	80 - 120
Arsenic	0.0091		1.00	1.02		mg/L		101	80 - 120
Barium	0.14		1.00	1.14		mg/L		100	80 - 120
Beryllium	ND		0.500	0.489		mg/L		98	80 - 120
Cadmium	ND		0.500	0.483		mg/L		97	80 - 120
Calcium	49		25.0	73.1		mg/L		95	80 - 120
Chromium	ND		0.500	0.490		mg/L		98	80 - 120
Cobalt	0.00047	J	0.500	0.490		mg/L		98	80 - 120
Lead	ND		0.500	0.450		mg/L		90	80 - 120
Lithium	0.0051	J	0.500	0.520		mg/L		103	80 - 120
Molybdenum	0.0019	J	0.500	0.498		mg/L		99	80 - 120
Selenium	ND		1.00	0.990		mg/L		99	80 - 120
Thallium	ND	F1 *+	1.00	1.41	F1	mg/L		141	80 - 120

Lab Sample ID: 180-182735-8 MSD
Matrix: Water
Analysis Batch: 636305

Client Sample ID: WAP-5I
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		0.100	0.101		mg/L		101	80 - 120	1	20
Arsenic	0.0091		1.00	0.999		mg/L		99	80 - 120	2	20
Barium	0.14		1.00	1.11		mg/L		96	80 - 120	3	20
Beryllium	ND		0.500	0.468		mg/L		94	80 - 120	4	20
Cadmium	ND		0.500	0.464		mg/L		93	80 - 120	4	20
Calcium	49		25.0	72.0		mg/L		91	80 - 120	2	20
Chromium	ND		0.500	0.473		mg/L		95	80 - 120	4	20
Cobalt	0.00047	J	0.500	0.470		mg/L		94	80 - 120	4	20
Lead	ND		0.500	0.436		mg/L		87	80 - 120	3	20
Lithium	0.0051	J	0.500	0.503		mg/L		100	80 - 120	3	20
Molybdenum	0.0019	J	0.500	0.487		mg/L		97	80 - 120	2	20
Selenium	ND		1.00	0.960		mg/L		96	80 - 120	3	20
Thallium	ND	F1 *+	1.00	1.36	F1	mg/L		136	80 - 120	4	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-636031/1-A
Matrix: Water
Analysis Batch: 636245

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 636031

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:10	1

Lab Sample ID: LCS 240-636031/2-A
Matrix: Water
Analysis Batch: 636245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 636031

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00477		mg/L		95	80 - 120

Method: EPA 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 180-182735-8 MS
Matrix: Water
Analysis Batch: 636245

Client Sample ID: WAP-5I
Prep Type: Total/NA
Prep Batch: 636031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		0.00100	0.000983		mg/L		98	80 - 120

Lab Sample ID: 180-182735-8 MSD
Matrix: Water
Analysis Batch: 636245

Client Sample ID: WAP-5I
Prep Type: Total/NA
Prep Batch: 636031

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.000967		mg/L		97	80 - 120	2	20

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-484553/1
Matrix: Water
Analysis Batch: 484553

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		99	99 - 101

Lab Sample ID: LCS 180-484553/24
Matrix: Water
Analysis Batch: 484553

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 180-182735-1 DU
Matrix: Water
Analysis Batch: 484553

Client Sample ID: WAP-2RR
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.7	HF	6.8		SU		0.4	2

Lab Sample ID: LCS 180-484994/1
Matrix: Water
Analysis Batch: 484994

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-486092/1
Matrix: Water
Analysis Batch: 486092

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		101	99 - 101

Method: EPA 9040C - pH (Continued)

Lab Sample ID: 180-182735-16 DU
Matrix: Water
Analysis Batch: 486092

Client Sample ID: FIELD BLANK
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	5.5	HF		5.5		SU				0	2

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

Lab Sample ID: MB 180-484481/1
Matrix: Water
Analysis Batch: 484481

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		10	10	mg/L			11/15/24 10:42	1

Lab Sample ID: LCS 180-484481/2
Matrix: Water
Analysis Batch: 484481

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			417	368		mg/L		88	85 - 115		

Lab Sample ID: 180-182735-7 DU
Matrix: Water
Analysis Batch: 484481

Client Sample ID: WAP-5S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	1200			1200		mg/L				0.3	10

Lab Sample ID: 180-182735-12 DU
Matrix: Water
Analysis Batch: 484481

Client Sample ID: WAP-7S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	730			728		mg/L				0.4	10

Lab Sample ID: MB 180-484482/1
Matrix: Water
Analysis Batch: 484482

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		10	10	mg/L			11/15/24 10:48	1

Lab Sample ID: LCS 180-484482/2
Matrix: Water
Analysis Batch: 484482

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			417	388		mg/L		93	85 - 115		

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

Lab Sample ID: MB 180-484512/1
Matrix: Water
Analysis Batch: 484512

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		10	10	mg/L			11/15/24 13:16	1

Lab Sample ID: LCS 180-484512/2
Matrix: Water
Analysis Batch: 484512

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	417	404		mg/L		97	85 - 115

Lab Sample ID: 180-182735-16 DU
Matrix: Water
Analysis Batch: 484512

Client Sample ID: FIELD BLANK
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	ND		ND		mg/L		NC	10

Lab Sample ID: MB 180-484514/1
Matrix: Water
Analysis Batch: 484514

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		10	10	mg/L			11/15/24 13:24	1

Lab Sample ID: LCS 180-484514/2
Matrix: Water
Analysis Batch: 484514

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	417	396		mg/L		95	85 - 115

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-689592/1-A
Matrix: Water
Analysis Batch: 693477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 689592

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01346	U	0.0465	0.0465	1.00	0.0923	pCi/L	11/20/24 09:57	12/13/24 14:03	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*30 - 110*	*11/20/24 09:57*	*12/13/24 14:03*	*1*

Lab Sample ID: LCS 160-689592/2-A
Matrix: Water
Analysis Batch: 693486

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 689592

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	9.58	9.561		1.03	1.00	0.131	pCi/L	100	75 - 125

Method: 9315 - Radium-226 (GFPC) (Continued)

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	89.1		30 - 110

Lab Sample ID: MB 160-689748/1-A
Matrix: Water
Analysis Batch: 693477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 689748

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.09819	U	0.0843	0.0847	1.00	0.123	pCi/L	11/21/24 08:47	12/13/24 07:36	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	94.9		30 - 110	11/21/24 08:47	12/13/24 07:36	1

Lab Sample ID: LCS 160-689748/2-A
Matrix: Water
Analysis Batch: 693477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 689748

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	9.624		1.07	1.00	0.143	pCi/L	100	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	91.4		30 - 110

Lab Sample ID: 180-182735-8 DU
Matrix: Water
Analysis Batch: 693486

Client Sample ID: WAP-5I
Prep Type: Total/NA
Prep Batch: 689748

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.286			0.2687		0.130	1.00	0.147	pCi/L			0.06	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	86.8		30 - 110

Lab Sample ID: MB 160-689750/1-A
Matrix: Water
Analysis Batch: 693691

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 689750

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01356	U	0.0915	0.0915	1.00	0.179	pCi/L	11/21/24 08:53	12/14/24 07:20	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		30 - 110	11/21/24 08:53	12/14/24 07:20	1

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-689750/2-A
Matrix: Water
Analysis Batch: 693691

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 689750

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	10.17		1.12	1.00	0.147	pCi/L	106	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.1*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-689594/1-A
Matrix: Water
Analysis Batch: 692133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 689594

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.01839	U	0.256	0.256	1.00	0.495	pCi/L	11/20/24 10:00	12/06/24 12:15	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*30 - 110*	*11/20/24 10:00*	*12/06/24 12:15*	*1*
Y Carrier	*79.3*		*30 - 110*	*11/20/24 10:00*	*12/06/24 12:15*	*1*

Lab Sample ID: LCS 160-689594/2-A
Matrix: Water
Analysis Batch: 692133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 689594

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.28	10.36		1.44	1.00	0.604	pCi/L	125	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.1*		*30 - 110*
Y Carrier	*78.1*		*30 - 110*

Lab Sample ID: MB 160-689749/1-A
Matrix: Water
Analysis Batch: 692652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 689749

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4903	U	0.374	0.377	1.00	0.576	pCi/L	11/21/24 08:51	12/09/24 12:09	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.9*		*30 - 110*	*11/21/24 08:51*	*12/09/24 12:09*	*1*
Y Carrier	*77.4*		*30 - 110*	*11/21/24 08:51*	*12/09/24 12:09*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-689749/2-A
Matrix: Water
Analysis Batch: 692652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 689749

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.28	8.298		1.22	1.00	0.523	pCi/L	100	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*91.4*		*30 - 110*
Y Carrier	*78.9*		*30 - 110*

Lab Sample ID: 180-182735-8 DU
Matrix: Water
Analysis Batch: 692652

Client Sample ID: WAP-5I
Prep Type: Total/NA
Prep Batch: 689749

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.485	U		0.1268	U	0.348	1.00	0.624	pCi/L			0.42	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*86.8*		*30 - 110*
Y Carrier	*81.1*		*30 - 110*

Lab Sample ID: MB 160-689751/1-A
Matrix: Water
Analysis Batch: 692927

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 689751

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1015	U	0.346	0.346	1.00	0.667	pCi/L	11/21/24 09:04	12/10/24 12:41	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.8*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:41*	*1*
Y Carrier	*81.9*		*30 - 110*	*11/21/24 09:04*	*12/10/24 12:41*	*1*

Lab Sample ID: LCS 160-689751/2-A
Matrix: Water
Analysis Batch: 692927

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 689751

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.27	8.335		1.23	1.00	0.612	pCi/L	101	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.1*		*30 - 110*
Y Carrier	*81.9*		*30 - 110*

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182735-1
SDG: FB Culley West

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 180-182735-8 DU
Matrix: Water
Analysis Batch: 694340

Client Sample ID: WAP-5I
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Combined Radium 226 + 228	0.771	U		0.3955	U	0.371	5.00	0.624	pCi/L			0.42	

HPLC/IC

Analysis Batch: 484597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-5	WAP-4I	Total/NA	Water	EPA 9056A	
180-182735-6	WAP-4D	Total/NA	Water	EPA 9056A	
180-182735-7	WAP-5S	Total/NA	Water	EPA 9056A	
180-182735-8	WAP-5I	Total/NA	Water	EPA 9056A	
180-182735-9	WAP-5D	Total/NA	Water	EPA 9056A	
180-182735-16	FIELD BLANK	Total/NA	Water	EPA 9056A	
MB 180-484597/45	Method Blank	Total/NA	Water	EPA 9056A	
MB 180-484597/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-484597/46	Lab Control Sample	Total/NA	Water	EPA 9056A	
LCS 180-484597/7	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-182735-8 MS	WAP-5I	Total/NA	Water	EPA 9056A	
180-182735-8 MSD	WAP-5I	Total/NA	Water	EPA 9056A	

Analysis Batch: 484626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total/NA	Water	EPA 9056A	
180-182735-2	WAP-3S	Total/NA	Water	EPA 9056A	
180-182735-3	WAP-3D	Total/NA	Water	EPA 9056A	
180-182735-3	WAP-3D	Total/NA	Water	EPA 9056A	
180-182735-10	WAP-6I	Total/NA	Water	EPA 9056A	
180-182735-11	WAP-6D	Total/NA	Water	EPA 9056A	
180-182735-12	WAP-7S	Total/NA	Water	EPA 9056A	
180-182735-12	WAP-7S	Total/NA	Water	EPA 9056A	
180-182735-13	WAP-7D	Total/NA	Water	EPA 9056A	
180-182735-13	WAP-7D	Total/NA	Water	EPA 9056A	
180-182735-14	DUP-1	Total/NA	Water	EPA 9056A	
180-182735-14	DUP-1	Total/NA	Water	EPA 9056A	
180-182735-15	DUP-2	Total/NA	Water	EPA 9056A	
MB 180-484626/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-484626/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 484846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-7	WAP-5S	Total/NA	Water	EPA 9056A	
MB 180-484846/49	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-484846/50	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 485325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-4	WAP-4S	Total/NA	Water	EPA 9056A	
180-182735-4	WAP-4S	Total/NA	Water	EPA 9056A	
MB 180-485325/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-485325/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 485686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-4	WAP-4S	Total/NA	Water	EPA 9056A	
MB 180-485686/35	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-485686/36	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 636024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total Recoverable	Water	3005A	
180-182735-2	WAP-3S	Total Recoverable	Water	3005A	
180-182735-3	WAP-3D	Total Recoverable	Water	3005A	
180-182735-4	WAP-4S	Total Recoverable	Water	3005A	
180-182735-5	WAP-4I	Total Recoverable	Water	3005A	
180-182735-6	WAP-4D	Total Recoverable	Water	3005A	
180-182735-7	WAP-5S	Total Recoverable	Water	3005A	
180-182735-8	WAP-5I	Total Recoverable	Water	3005A	
180-182735-9	WAP-5D	Total Recoverable	Water	3005A	
180-182735-10	WAP-6I	Total Recoverable	Water	3005A	
180-182735-11	WAP-6D	Total Recoverable	Water	3005A	
180-182735-12	WAP-7S	Total Recoverable	Water	3005A	
180-182735-13	WAP-7D	Total Recoverable	Water	3005A	
180-182735-14	DUP-1	Total Recoverable	Water	3005A	
180-182735-15	DUP-2	Total Recoverable	Water	3005A	
180-182735-16	FIELD BLANK	Total Recoverable	Water	3005A	
MB 240-636024/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-636024/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-636024/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-182735-8 MS	WAP-5I	Total Recoverable	Water	3005A	
180-182735-8 MS	WAP-5I	Total Recoverable	Water	3005A	
180-182735-8 MSD	WAP-5I	Total Recoverable	Water	3005A	
180-182735-8 MSD	WAP-5I	Total Recoverable	Water	3005A	

Prep Batch: 636031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total/NA	Water	7470A	
180-182735-2	WAP-3S	Total/NA	Water	7470A	
180-182735-3	WAP-3D	Total/NA	Water	7470A	
180-182735-4	WAP-4S	Total/NA	Water	7470A	
180-182735-5	WAP-4I	Total/NA	Water	7470A	
180-182735-6	WAP-4D	Total/NA	Water	7470A	
180-182735-7	WAP-5S	Total/NA	Water	7470A	
180-182735-8	WAP-5I	Total/NA	Water	7470A	
180-182735-9	WAP-5D	Total/NA	Water	7470A	
180-182735-10	WAP-6I	Total/NA	Water	7470A	
180-182735-11	WAP-6D	Total/NA	Water	7470A	
180-182735-12	WAP-7S	Total/NA	Water	7470A	
180-182735-13	WAP-7D	Total/NA	Water	7470A	
180-182735-14	DUP-1	Total/NA	Water	7470A	
180-182735-15	DUP-2	Total/NA	Water	7470A	
180-182735-16	FIELD BLANK	Total/NA	Water	7470A	
MB 240-636031/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-636031/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-182735-8 MS	WAP-5I	Total/NA	Water	7470A	
180-182735-8 MSD	WAP-5I	Total/NA	Water	7470A	

Analysis Batch: 636245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total/NA	Water	EPA 7470A	636031
180-182735-2	WAP-3S	Total/NA	Water	EPA 7470A	636031

Metals (Continued)

Analysis Batch: 636245 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-3	WAP-3D	Total/NA	Water	EPA 7470A	636031
180-182735-4	WAP-4S	Total/NA	Water	EPA 7470A	636031
180-182735-5	WAP-4I	Total/NA	Water	EPA 7470A	636031
180-182735-6	WAP-4D	Total/NA	Water	EPA 7470A	636031
180-182735-7	WAP-5S	Total/NA	Water	EPA 7470A	636031
180-182735-8	WAP-5I	Total/NA	Water	EPA 7470A	636031
180-182735-9	WAP-5D	Total/NA	Water	EPA 7470A	636031
180-182735-10	WAP-6I	Total/NA	Water	EPA 7470A	636031
180-182735-11	WAP-6D	Total/NA	Water	EPA 7470A	636031
180-182735-12	WAP-7S	Total/NA	Water	EPA 7470A	636031
180-182735-13	WAP-7D	Total/NA	Water	EPA 7470A	636031
180-182735-14	DUP-1	Total/NA	Water	EPA 7470A	636031
180-182735-15	DUP-2	Total/NA	Water	EPA 7470A	636031
180-182735-16	FIELD BLANK	Total/NA	Water	EPA 7470A	636031
MB 240-636031/1-A	Method Blank	Total/NA	Water	EPA 7470A	636031
LCS 240-636031/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	636031
180-182735-8 MS	WAP-5I	Total/NA	Water	EPA 7470A	636031
180-182735-8 MSD	WAP-5I	Total/NA	Water	EPA 7470A	636031

Analysis Batch: 636305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total Recoverable	Water	EPA 6020B	636024
180-182735-2	WAP-3S	Total Recoverable	Water	EPA 6020B	636024
180-182735-3	WAP-3D	Total Recoverable	Water	EPA 6020B	636024
180-182735-4	WAP-4S	Total Recoverable	Water	EPA 6020B	636024
180-182735-5	WAP-4I	Total Recoverable	Water	EPA 6020B	636024
180-182735-6	WAP-4D	Total Recoverable	Water	EPA 6020B	636024
180-182735-7	WAP-5S	Total Recoverable	Water	EPA 6020B	636024
180-182735-8	WAP-5I	Total Recoverable	Water	EPA 6020B	636024
180-182735-9	WAP-5D	Total Recoverable	Water	EPA 6020B	636024
180-182735-10	WAP-6I	Total Recoverable	Water	EPA 6020B	636024
180-182735-11	WAP-6D	Total Recoverable	Water	EPA 6020B	636024
180-182735-12	WAP-7S	Total Recoverable	Water	EPA 6020B	636024
180-182735-13	WAP-7D	Total Recoverable	Water	EPA 6020B	636024
180-182735-14	DUP-1	Total Recoverable	Water	EPA 6020B	636024
180-182735-15	DUP-2	Total Recoverable	Water	EPA 6020B	636024
180-182735-16	FIELD BLANK	Total Recoverable	Water	EPA 6020B	636024
MB 240-636024/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	636024
LCS 240-636024/3-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	636024
180-182735-8 MS	WAP-5I	Total Recoverable	Water	EPA 6020B	636024
180-182735-8 MSD	WAP-5I	Total Recoverable	Water	EPA 6020B	636024

Analysis Batch: 636324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total Recoverable	Water	EPA 6010D	636024
180-182735-2	WAP-3S	Total Recoverable	Water	EPA 6010D	636024
180-182735-3	WAP-3D	Total Recoverable	Water	EPA 6010D	636024
180-182735-4	WAP-4S	Total Recoverable	Water	EPA 6010D	636024
180-182735-5	WAP-4I	Total Recoverable	Water	EPA 6010D	636024
180-182735-6	WAP-4D	Total Recoverable	Water	EPA 6010D	636024
180-182735-7	WAP-5S	Total Recoverable	Water	EPA 6010D	636024

Metals (Continued)

Analysis Batch: 636324 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-8	WAP-5I	Total Recoverable	Water	EPA 6010D	636024
180-182735-9	WAP-5D	Total Recoverable	Water	EPA 6010D	636024
180-182735-10	WAP-6I	Total Recoverable	Water	EPA 6010D	636024
180-182735-11	WAP-6D	Total Recoverable	Water	EPA 6010D	636024
180-182735-12	WAP-7S	Total Recoverable	Water	EPA 6010D	636024
180-182735-13	WAP-7D	Total Recoverable	Water	EPA 6010D	636024
180-182735-14	DUP-1	Total Recoverable	Water	EPA 6010D	636024
180-182735-15	DUP-2	Total Recoverable	Water	EPA 6010D	636024
180-182735-16	FIELD BLANK	Total Recoverable	Water	EPA 6010D	636024
MB 240-636024/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	636024
LCS 240-636024/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	636024
180-182735-8 MS	WAP-5I	Total Recoverable	Water	EPA 6010D	636024
180-182735-8 MSD	WAP-5I	Total Recoverable	Water	EPA 6010D	636024

Analysis Batch: 636748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total Recoverable	Water	EPA 6020B	636024
180-182735-2	WAP-3S	Total Recoverable	Water	EPA 6020B	636024
180-182735-3	WAP-3D	Total Recoverable	Water	EPA 6020B	636024
180-182735-4	WAP-4S	Total Recoverable	Water	EPA 6020B	636024
180-182735-5	WAP-4I	Total Recoverable	Water	EPA 6020B	636024
180-182735-6	WAP-4D	Total Recoverable	Water	EPA 6020B	636024
180-182735-7	WAP-5S	Total Recoverable	Water	EPA 6020B	636024
180-182735-9	WAP-5D	Total Recoverable	Water	EPA 6020B	636024
180-182735-10	WAP-6I	Total Recoverable	Water	EPA 6020B	636024
180-182735-11	WAP-6D	Total Recoverable	Water	EPA 6020B	636024
180-182735-12	WAP-7S	Total Recoverable	Water	EPA 6020B	636024
180-182735-13	WAP-7D	Total Recoverable	Water	EPA 6020B	636024
180-182735-14	DUP-1	Total Recoverable	Water	EPA 6020B	636024
180-182735-15	DUP-2	Total Recoverable	Water	EPA 6020B	636024
180-182735-16	FIELD BLANK	Total Recoverable	Water	EPA 6020B	636024

Analysis Batch: 636847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-636024/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	636024
LCS 240-636024/3-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	636024

General Chemistry

Analysis Batch: 484481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-7	WAP-5S	Total/NA	Water	SM 2540C	
180-182735-12	WAP-7S	Total/NA	Water	SM 2540C	
MB 180-484481/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-484481/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-182735-7 DU	WAP-5S	Total/NA	Water	SM 2540C	
180-182735-12 DU	WAP-7S	Total/NA	Water	SM 2540C	

Analysis Batch: 484482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-10	WAP-6I	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 484482 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-15	DUP-2	Total/NA	Water	SM 2540C	
MB 180-484482/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-484482/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 484512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total/NA	Water	SM 2540C	
180-182735-2	WAP-3S	Total/NA	Water	SM 2540C	
180-182735-3	WAP-3D	Total/NA	Water	SM 2540C	
180-182735-4	WAP-4S	Total/NA	Water	SM 2540C	
180-182735-5	WAP-4I	Total/NA	Water	SM 2540C	
180-182735-6	WAP-4D	Total/NA	Water	SM 2540C	
180-182735-8	WAP-5I	Total/NA	Water	SM 2540C	
180-182735-9	WAP-5D	Total/NA	Water	SM 2540C	
180-182735-13	WAP-7D	Total/NA	Water	SM 2540C	
180-182735-14	DUP-1	Total/NA	Water	SM 2540C	
180-182735-16	FIELD BLANK	Total/NA	Water	SM 2540C	
MB 180-484512/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-484512/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-182735-16 DU	FIELD BLANK	Total/NA	Water	SM 2540C	

Analysis Batch: 484514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-11	WAP-6D	Total/NA	Water	SM 2540C	
MB 180-484514/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-484514/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 484553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total/NA	Water	EPA 9040C	
180-182735-3	WAP-3D	Total/NA	Water	EPA 9040C	
180-182735-4	WAP-4S	Total/NA	Water	EPA 9040C	
180-182735-5	WAP-4I	Total/NA	Water	EPA 9040C	
180-182735-7	WAP-5S	Total/NA	Water	EPA 9040C	
180-182735-8	WAP-5I	Total/NA	Water	EPA 9040C	
180-182735-9	WAP-5D	Total/NA	Water	EPA 9040C	
180-182735-10	WAP-6I	Total/NA	Water	EPA 9040C	
180-182735-11	WAP-6D	Total/NA	Water	EPA 9040C	
180-182735-12	WAP-7S	Total/NA	Water	EPA 9040C	
180-182735-13	WAP-7D	Total/NA	Water	EPA 9040C	
180-182735-14	DUP-1	Total/NA	Water	EPA 9040C	
180-182735-15	DUP-2	Total/NA	Water	EPA 9040C	
LCS 180-484553/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
LCS 180-484553/24	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-182735-1 DU	WAP-2RR	Total/NA	Water	EPA 9040C	

Analysis Batch: 484994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-2	WAP-3S	Total/NA	Water	EPA 9040C	
180-182735-6	WAP-4D	Total/NA	Water	EPA 9040C	
LCS 180-484994/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

General Chemistry

Analysis Batch: 486092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-16	FIELD BLANK	Total/NA	Water	EPA 9040C	
LCS 180-486092/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-182735-16 DU	FIELD BLANK	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 689592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total/NA	Water	PrecSep-21	
180-182735-2	WAP-3S	Total/NA	Water	PrecSep-21	
180-182735-3	WAP-3D	Total/NA	Water	PrecSep-21	
180-182735-4	WAP-4S	Total/NA	Water	PrecSep-21	
MB 160-689592/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-689592/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 689594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-1	WAP-2RR	Total/NA	Water	PrecSep_0	
180-182735-2	WAP-3S	Total/NA	Water	PrecSep_0	
180-182735-3	WAP-3D	Total/NA	Water	PrecSep_0	
180-182735-4	WAP-4S	Total/NA	Water	PrecSep_0	
MB 160-689594/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-689594/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 689748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-5	WAP-4I	Total/NA	Water	PrecSep-21	
180-182735-6	WAP-4D	Total/NA	Water	PrecSep-21	
180-182735-7	WAP-5S	Total/NA	Water	PrecSep-21	
180-182735-8	WAP-5I	Total/NA	Water	PrecSep-21	
180-182735-9	WAP-5D	Total/NA	Water	PrecSep-21	
MB 160-689748/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-689748/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-182735-8 DU	WAP-5I	Total/NA	Water	PrecSep-21	

Prep Batch: 689749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-5	WAP-4I	Total/NA	Water	PrecSep_0	
180-182735-6	WAP-4D	Total/NA	Water	PrecSep_0	
180-182735-7	WAP-5S	Total/NA	Water	PrecSep_0	
180-182735-8	WAP-5I	Total/NA	Water	PrecSep_0	
180-182735-9	WAP-5D	Total/NA	Water	PrecSep_0	
MB 160-689749/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-689749/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-182735-8 DU	WAP-5I	Total/NA	Water	PrecSep_0	

Prep Batch: 689750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-10	WAP-6I	Total/NA	Water	PrecSep-21	
180-182735-11	WAP-6D	Total/NA	Water	PrecSep-21	
180-182735-12	WAP-7S	Total/NA	Water	PrecSep-21	

Rad (Continued)

Prep Batch: 689750 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-13	WAP-7D	Total/NA	Water	PrecSep-21	
180-182735-14	DUP-1	Total/NA	Water	PrecSep-21	
180-182735-15	DUP-2	Total/NA	Water	PrecSep-21	
180-182735-16	FIELD BLANK	Total/NA	Water	PrecSep-21	
MB 160-689750/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-689750/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 689751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182735-10	WAP-6I	Total/NA	Water	PrecSep_0	
180-182735-11	WAP-6D	Total/NA	Water	PrecSep_0	
180-182735-12	WAP-7S	Total/NA	Water	PrecSep_0	
180-182735-13	WAP-7D	Total/NA	Water	PrecSep_0	
180-182735-14	DUP-1	Total/NA	Water	PrecSep_0	
180-182735-15	DUP-2	Total/NA	Water	PrecSep_0	
180-182735-16	FIELD BLANK	Total/NA	Water	PrecSep_0	
MB 160-689751/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-689751/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Virginia Beach Service Center

Chain of Custody Record

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Virginia Beach Service Center

Client Information	Sampler: Jon Hall	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-106632-14503.3
Client Contact: Britton Hundley	Phone: 317-473-1325	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: IN	Page: Page 3 of 3
Company: Haley & Aldrich Inc.	PWSID:			Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
N None
D HNO3
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd TDS by 2540C	9315_Ra226, 9320_Ra228	6020B Metals by 6020B	7470A Hg by 7470A	6010D Boron by 6010D											Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D	D												
MAP-2RR	11.13.24	1230	G	W																				
MAP-3S		1005																						
MAP-3D		0855																						
MAP-4S	11.12.24	1530																						
MAP-4I		1450																						
MAP-4D		1420																						
MAP-5S		1250																						
MAP-5I		1125																						
MAP-5D		1028																						
MAP-6I	11.13.24	0830																						
MAP-6D		0805																						

180-182735 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested. I II III, IV Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Jon Hall	11.13.24 1630	ATLS		14/24 1110	LPI
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	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:

Virginia Beach Service Center

Ver: 05/06/2024

Virginia Beach Service Center

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Jon Hall	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-106632-14503.1
Client Contact: Britton Hundley	Phone: 317-473-1325	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: IN	Page: Page 1 of 3
Company: Haley & Aldrich Inc.	PWSID:	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			Preservation Codes: N None, D HNO3
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd TDS by 2540C	9315_Ra226, 9320_Ra228	6020B Metals by 6020B	7470A Hg by 7470A	6010D Boron by 6010D	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D	D		
WAP-7S	11/13/24	1100	G	W										
WAP-7D	↓	1140												
MS-1	11/12/24	1125												WAP-5I
MSD-1	↓	1125												WAP-5I
Dup-1	↓	—												
Dup-2	11/13/24	—												
Field Blank	11/12/24	1220	↓	↓										

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Jon Hall	11/13/24/1630	AH&A			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
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:

Ver: 05/06/2024

12/19/2024



180-182735 Waybill

CRAIG KA
FB CULLEY
3711 DARL

NEWBURGH,
UNITED ST

TO SAMP
EURO
301 Al

PITT[illegible]RGH PA 15238
(412) 963 - 7058 REF
INV:
PO: DEPT.

RMA.

FedEx Express

FedEx
TRK# 0221 7236 3964 0257

[illegible]TIONS MON-SAT
THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

NX AGCA

15238
PA-US PIT

Uncorrected temp
Thermometer ID 1.1 17
CF -0.1 Initials
PT-WI-SR-001 effective 11/8/18
Uncorrected temp °C

#6190970 11/13 5BCJ5/582E/C8C4

CRAIG
FB CU
3711 I

NEWBUF
UNITED STATES US

TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058 REF
INV:
PO: DEPT.

RMA.

Uncorrected temp
Thermometer ID 2.4 17
CF -0.1 Initials
PT-WI-SR-001 effective.11/8/18
Uncorrected temp °C

FedEx Express

FedEx
TRK# 0221 7236 3964 0279

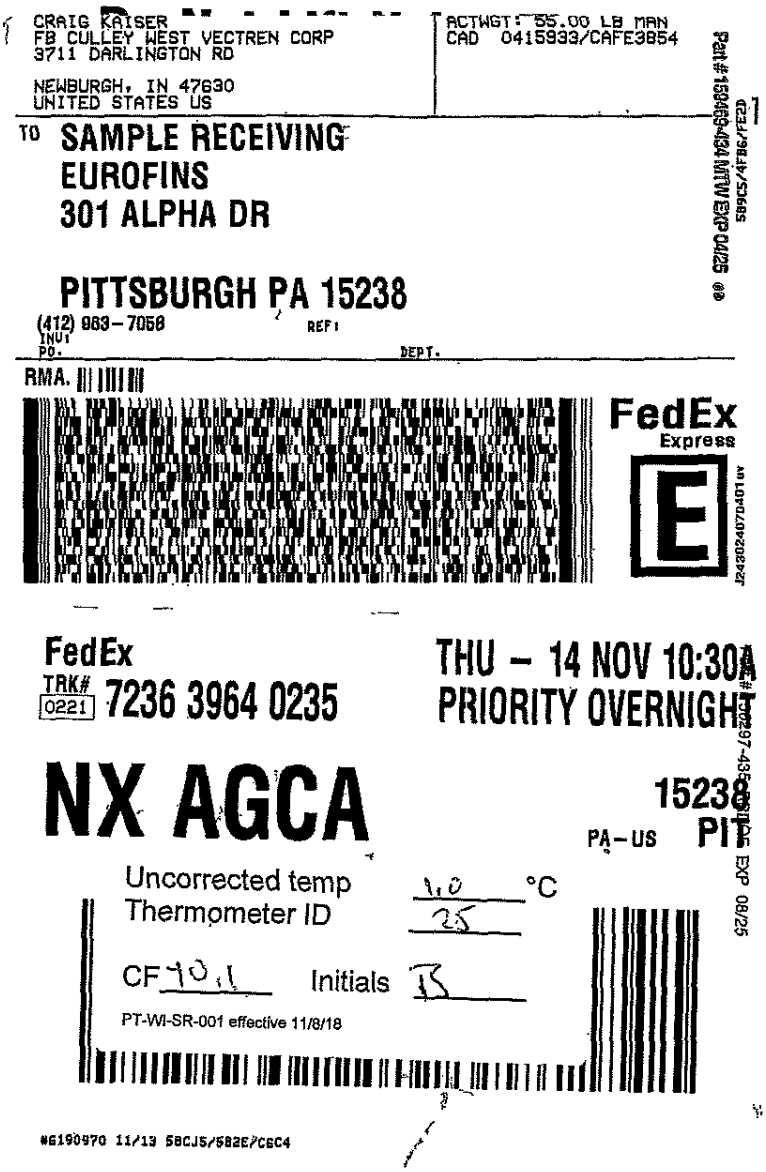
THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

NX AGCA

15238
PA-US PIT

#6190970 11/13 5BCJ5/I

RT 198 1
10:30 A
FZ 197 0279
11 14



CRAIG KAISER
FB CULLEY WEST VECTREN CORP
3711 DARLINGTON RD

NEWBURGH, IN 47630
UNITED STATES US

ACTWGT: 55.00 LB MAN
CAD 0415933/CAFE3854

TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058

INV:
PO:
REF:
DEPT:

RMA.

FedEx Express

FedEx
TRK# 0221 7236 3964 0235

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

NX AGCA

15238
PA-US PIT

Uncorrected temp 1.0 °C
Thermometer ID 25

CF 10.1 Initials JB

PT-WI-SR-001 effective 11/8/18

#6190970 11/13 58CJ5/582E/C6C4

NEWBURGH, IN 47630
UNITED STATES US

TO **SAMPLE RECEIVING**
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058 REF:
INV:
PO: DEPT.

RMA.

FedEx Express

FedEx
TRK# 0221 7236 3964 0268

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

NX AGCA

15238
PA-US PIT

Uncorrected temp 2.4 °C
Thermometer ID 25
CF +0.1 Initials B

PT-WI-SR-001 effective 11/8/18

W6190970 11/13 5BCJ5/5B2E/C6C4

CRAIG KAISER
FB CULLEY WEST VECTREN CORP
3711 DARLINGTON RD

NEWBURGH, IN 47630
UNITED STATES US

ACTWGT: 55.00 LB MAN
CAD: 0415933/CAFE3854

TO **SAMPLE RECEIVING**
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058 REF:
INV:
PO: DEPT.

RMA.

FedEx Express

FedEx
TRK# 0221 7236 3964 0246

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

NX AGCA

15238
PA-US PIT

Uncorrected temp 4.2 °C
Thermometer ID 25
CF +0.1 Initials B

PT-WI-SR-001 effective 11/8/18

W6190970 11/13 5BCJ5/5B2E/C6C4

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Johnson, Andy	Carrier Tracking No(s): N/A	COC No: 180-528232.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 180-182735-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 12/19/2024			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WAP-2RR (180-182735-1)	11/13/24	12:30 Eastern	G	Water			X	X	X	2	
WAP-3S (180-182735-2)	11/13/24	10:05 Eastern	G	Water			X	X	X	2	
WAP-3D (180-182735-3)	11/13/24	08:55 Eastern	G	Water			X	X	X	2	
WAP-4S (180-182735-4)	11/12/24	15:30 Eastern	G	Water			X	X	X	2	
WAP-4I (180-182735-5)	11/12/24	14:50 Eastern	G	Water			X	X	X	1	
WAP-4D (180-182735-6)	11/12/24	14:20 Eastern	G	Water			X	X	X	2	
WAP-5S (180-182735-7)	11/12/24	12:50 Eastern	G	Water			X	X	X	2	
WAP-5I (180-182735-8)	11/12/24	11:25 Eastern	G	Water			X	X	X	2	
WAP-5I (180-182735-8DU)	11/12/24	11:25 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 11-18-24 1700	Company: EPTNE	Received by:	Date/Time: NOV 19 2024 0910	Company
Relinquished by:	Date/Time:	Company	Received by: M. Pinette	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks.

Ver: 10/10/2024

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Johnson, Andy	Carrier Tracking No(s): N/A	COC No: 180-528232.2
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 180-182735-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 12/19/2024			
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WAP-5D (180-182735-9)	11/12/24	10:28 Eastern	G	Water			X	X	X	2	
WAP-6I (180-182735-10)	11/13/24	06:30 Eastern	G	Water			X	X	X	2	
WAP-6D (180-182735-11)	11/13/24	08:05 Eastern	G	Water			X	X	X	2	
WAP-7S (180-182735-12)	11/13/24	11:00 Eastern	G	Water			X	X	X	2	
WAP-7D (180-182735-13)	11/13/24	11:40 Eastern	G	Water			X	X	X	2	
DUP-1 (180-182735-14)	11/13/24	Eastern	G	Water			X	X	X	2	
DUP-2 (180-182735-15)	11/13/24	Eastern	G	Water			X	X	X	2	
FIELD BLANK (180-182735-16)	11/12/24	12:20 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11-18-24 1200	EPITME	M. Pinette	NOV 19 2024 0910	
Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company
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:

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-182735-1
SDG Number: FB Culley West

Login Number: 182735
List Number: 1
Creator: Abernathy, Eric L

List Source: Eurofins Pittsburgh

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.	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?	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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-182735-1
SDG Number: FB Culley West

Login Number: 182735
List Number: 3
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 11/19/24 01:44 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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Todd Plating
Haley & Aldrich, Inc.
400 Augusta Street
Suite 100
Greenville, South Carolina 29601

Generated 12/19/2024 4:43:19 PM

JOB DESCRIPTION

CCR Groundwater Monitoring FB Culley West
FB Culley West

JOB NUMBER

180-182730-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

my EOL

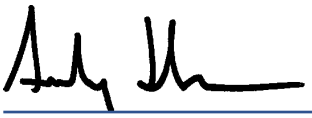
Job Notes

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



Generated
12/19/2024 4:43:19 PM

Authorized for release by
Andy Johnson, Senior Project Manager
Andy.Johnson@et.eurofinsus.com
(615)818-9567

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Job ID: 180-182730-1 Eurofins Pittsburgh

Job Narrative
180-182730-1

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 11/14/2024 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 1.0°C, 1.1°C, 1.3°C, 2.3°C and 2.5°C.

Receipt Exceptions
The one liter nitric preserved bottle has only about 650mL of sample volume. WAP-1 (180-182730-4)

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

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

Job ID: 180-182730-2 Eurofins Pittsburgh

Job Narrative
180-182730-2

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 11/14/2024 9:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 1.0°C, 1.1°C, 1.3°C, 2.3°C and 2.5°C.

Receipt Exceptions
Only one 1L nitric acid-preserved container was received and contained about 650mL of sample volume. WAP-1 (180-182730-4)

HPLC/IC
Method 9056A_ORGFM_28D: The following sample was diluted due to the nature of the sample matrix: WAP-1 (180-182730-4). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following sample was diluted to bring the concentration of target analytes within the calibration range: WAP-8S (180-182730-3). Elevated reporting limits (RLs) are provided.

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

Metals
Method 6020B - Total Recoverable: The laboratory control sample (LCS) for preparation batch 240-636024 and analytical batch 240-636305 recovered outside control limits for the following analytes: Thallium. These analytes were biased high in the LCS and were below the reporting limit in the associated samples; therefore, the data have been reported.

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.

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182730-1
SDG: FB Culley West

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182730-1
SDG: FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-28-25
California	State	2891	04-30-24 *
Connecticut	State	PH-0688	09-30-24 *
Florida	NELAP	E871008	06-30-25
Georgia	State	PA 02-00416	04-30-25
Illinois	NELAP	004375	07-31-25
Kansas	NELAP	E-10350	01-31-25
Kentucky (UST)	State	162013	04-30-25
Kentucky (WW)	State	KY98043	12-31-24
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-25
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-24
New Hampshire	NELAP	2030	04-04-25
New Jersey	NELAP	PA005	06-30-25
New York	NELAP	11182	04-01-25
North Carolina (WW/SW)	State	434	12-31-24
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-25
Pennsylvania	NELAP	02-00416	04-30-25
Rhode Island	State	LAO00362	01-01-25
South Carolina	State	89014	04-30-25
Texas	NELAP	T104704528	03-31-25
US Fish & Wildlife	US Federal Programs	058448	04-30-25
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462024-14	05-31-25
Virginia	NELAP	10043	07-14-24 *
West Virginia DEP	State	142	01-31-25
Wisconsin	State	998027800	08-31-25

Laboratory: Eurofins Cleveland

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
USDA	US Federal Programs	P330-18-00281	01-05-27

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 180-182730-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Laboratory: Eurofins Cleveland (Continued)

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

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-24

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-08-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-25
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-25
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	12-31-24
Oklahoma	NELAP	9997	12-31-24
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

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

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182730-1
SDG: FB Culley West

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-182730-1	WAP-8D	Water	11/12/24 13:13	11/14/24 09:10
180-182730-2	WAP-8I	Water	11/12/24 15:25	11/14/24 09:10
180-182730-3	WAP-8S	Water	11/12/24 16:46	11/14/24 09:10
180-182730-4	WAP-1	Water	11/13/24 10:00	11/14/24 09:10

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182730-1
SDG: FB Culley West

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Client Sample ID: WAP-8D
Lab Sample ID: 180-182730-1
Date Collected: 11/12/24 13:13
Matrix: Water
Date Received: 11/14/24 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484597	11/18/24 20:28	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 04:52	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:23	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:22	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 09:22	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			990.08 mL	1.0 g	689592	11/20/24 09:57	BCE	EET SL
Total/NA	Analysis	9315		1			693487	12/13/24 14:13	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			990.08 mL	1.0 g	689594	11/20/24 10:00	BCE	EET SL
Total/NA	Analysis	9320		1			692135	12/06/24 14:09	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694177	12/17/24 10:55	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-8I
Lab Sample ID: 180-182730-2
Date Collected: 11/12/24 15:25
Matrix: Water
Date Received: 11/14/24 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484597	11/18/24 20:40	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 04:57	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:26	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:24	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484553	11/16/24 09:56	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182730-1
SDG: FB Culley West

Client Sample ID: WAP-8I

Date Collected: 11/12/24 15:25
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			991.65 mL	1.0 g	689592	11/20/24 09:57	BCE	EET SL
Total/NA	Analysis	9315		1			693487	12/13/24 14:13	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			991.65 mL	1.0 g	689594	11/20/24 10:00	BCE	EET SL
Total/NA	Analysis	9320		1			692135	12/06/24 14:09	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694177	12/17/24 10:55	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-8S

Date Collected: 11/12/24 16:46
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484597	11/18/24 19:26	ERP	EET PIT
	Instrument ID: INUVION									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	484597	11/18/24 19:38	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:01	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:34	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:21	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:25	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			485167	11/23/24 09:44	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			979.01 mL	1.0 g	689592	11/20/24 09:57	BCE	EET SL
Total/NA	Analysis	9315		1			693487	12/13/24 14:13	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			979.01 mL	1.0 g	689594	11/20/24 10:00	BCE	EET SL
Total/NA	Analysis	9320		1			692135	12/06/24 14:09	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694177	12/17/24 10:55	FLC	EET SL
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182730-1
SDG: FB Culley West

Client Sample ID: WAP-1

Date Collected: 11/13/24 10:00
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484626	11/18/24 19:41	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	484626	11/18/24 19:56	ERP	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 05:05	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 18:37	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636024	11/20/24 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636748	11/26/24 03:24	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636031	11/20/24 14:00	BN	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 10:27	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			485174	11/23/24 12:00	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484512	11/15/24 13:16	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			665.82 mL	1.0 g	689592	11/20/24 09:57	BCE	EET SL
Total/NA	Analysis	9315		1			693487	12/13/24 14:13	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			665.82 mL	1.0 g	689594	11/20/24 10:00	BCE	EET SL
Total/NA	Analysis	9320		1			692135	12/06/24 14:09	SCB	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			694177	12/17/24 10:55	FLC	EET SL
	Instrument ID: NOEQUIP									

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182730-1
SDG: FB Culley West

Analyst References:

Lab: EET CLE
- Batch Type: Prep
  - BN = Benjamin Norman
- Batch Type: Analysis
  - AJC = Alexander Colosi
  - RKT = Roger Toth
  - TQ6W = Bryan Perelka

Lab: EET PIT
- Batch Type: Analysis
  - BAB = Brooke Batyi
  - EBA = Elizabeth Arbster
  - ERP = Evan Papak

Lab: EET SL
- Batch Type: Prep
  - BCE = Benjamin Celeslie
- Batch Type: Analysis
  - FLC = Fernando Cruz
  - SCB = Sarah Bernsen

Client Sample ID: WAP-8D

Date Collected: 11/12/24 13:13
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-1

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		1.0	0.71	mg/L			11/18/24 20:28	1
Fluoride	0.17		0.10	0.026	mg/L			11/18/24 20:28	1
Sulfate	43		1.0	0.76	mg/L			11/18/24 20:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.057	J	0.10	0.057	mg/L		11/20/24 14:00	11/22/24 04:52	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00061	J	0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:23	1
Arsenic	0.0036	J	0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:23	1
Barium	0.067		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:23	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:23	1
Cadmium	0.00022	J	0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:23	1
Calcium	39		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:23	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:23	1
Cobalt	0.00019	J	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:23	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/21/24 18:23	1
Lithium	0.0035	J	0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:23	1
Molybdenum	0.0019	J	0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:23	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:23	1
Thallium	0.00063	J *+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:23	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	210		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.4	HF	0.1	0.1	SU			11/16/24 09:22	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.101	U	0.0852	0.0856	1.00	0.128	pCi/L	11/20/24 09:57	12/13/24 14:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.3*		*30 - 110*	*11/20/24 09:57*	*12/13/24 14:13*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.343	U	0.484	0.485	1.00	0.813	pCi/L	11/20/24 10:00	12/06/24 14:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.3*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Client Sample ID: WAP-8D
Date Collected: 11/12/24 13:13
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-1
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*79.6*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.444	U	0.491	0.492	5.00	0.813	pCi/L		12/17/24 10:55	1

Client Sample ID: WAP-8I
Date Collected: 11/12/24 15:25
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-2
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29**		1.0	0.71	mg/L			11/18/24 20:40	1
Fluoride	**0.17**		0.10	0.026	mg/L			11/18/24 20:40	1
Sulfate	**45**		1.0	0.76	mg/L			11/18/24 20:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.086**	**J**	0.10	0.057	mg/L		11/20/24 14:00	11/22/24 04:57	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:26	1
Arsenic	**0.0032**	**J**	0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:26	1
Barium	**0.058**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:26	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:26	1
Cadmium	**0.00012**	**J**	0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:26	1
Calcium	**48**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:26	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:26	1
Cobalt	**0.00053**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:26	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/21/24 18:26	1
Lithium	**0.0036**	**J**	0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:26	1
Molybdenum	**0.018**		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:26	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:26	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:26	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**250**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			11/16/24 09:56	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.107	U	0.0864	0.0869	1.00	0.129	pCi/L	11/20/24 09:57	12/13/24 14:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.9*		*30 - 110*	*11/20/24 09:57*	*12/13/24 14:13*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.186	U	0.420	0.421	1.00	0.837	pCi/L	11/20/24 10:00	12/06/24 14:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*90.9*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Client Sample ID: WAP-8I
Date Collected: 11/12/24 15:25
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-2
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*69.9*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0790	U	0.429	0.430	5.00	0.837	pCi/L		12/17/24 10:55	1

Client Sample ID: WAP-8S

Date Collected: 11/12/24 16:46
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-3

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**96**		5.0	3.6	mg/L			11/18/24 19:38	5
Fluoride	**0.13**		0.10	0.026	mg/L			11/18/24 19:26	1
Sulfate	**420**		5.0	3.8	mg/L			11/18/24 19:38	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.3**		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:01	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:34	1
Arsenic	**0.017**		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:34	1
Barium	**0.14**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:34	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:34	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:34	1
Calcium	**160**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:34	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:34	1
Cobalt	**0.0024**		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:34	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:21	1
Lithium	**0.024**		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:34	1
Molybdenum	**0.25**		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:34	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:34	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:34	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**900**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**	**HF**	0.1	0.1	SU			11/23/24 09:44	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.251**		0.104	0.107	1.00	0.111	pCi/L	11/20/24 09:57	12/13/24 14:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.8*		*30 - 110*	*11/20/24 09:57*	*12/13/24 14:13*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.156	U	0.398	0.398	1.00	0.790	pCi/L	11/20/24 10:00	12/06/24 14:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.8*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Client Sample ID: WAP-8S
Date Collected: 11/12/24 16:46
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-3
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*77.4*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0952	U	0.411	0.412	5.00	0.790	pCi/L		12/17/24 10:55	1

Client Sample ID: WAP-1
Date Collected: 11/13/24 10:00
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-4
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75**		1.0	0.71	mg/L			11/18/24 19:41	1
Fluoride	**0.24**		0.10	0.026	mg/L			11/18/24 19:41	1
Sulfate	**300**		5.0	3.8	mg/L			11/18/24 19:56	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 05:05	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:37	1
Arsenic	**0.0029**	**J**	0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:37	1
Barium	**0.41**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:37	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:37	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:37	1
Calcium	**180**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:37	1
Chromium	**0.0039**	**J**	0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:37	1
Cobalt	**0.0016**		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:37	1
Lead	**0.0036**		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 03:24	1
Lithium	**0.0071**	**J**	0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:37	1
Molybdenum	ND		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:37	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:37	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:37	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**980**		10	10	mg/L			11/15/24 13:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.1**	**HF**	0.1	0.1	SU			11/23/24 12:00	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.525**		0.189	0.195	1.00	0.209	pCi/L	11/20/24 09:57	12/13/24 14:13	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.7*		*30 - 110*	*11/20/24 09:57*	*12/13/24 14:13*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.128	U	0.481	0.481	1.00	0.967	pCi/L	11/20/24 10:00	12/06/24 14:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.7*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Client Sample ID: WAP-1
Date Collected: 11/13/24 10:00
Date Received: 11/14/24 09:10

Lab Sample ID: 180-182730-4
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*78.5*		*30 - 110*	*11/20/24 10:00*	*12/06/24 14:09*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.397	U	0.517	0.519	5.00	0.967	pCi/L		12/17/24 10:55	1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-484597/45
Matrix: Water
Analysis Batch: 484597

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.745	J	1.0	0.71	mg/L			11/18/24 17:57	1
Fluoride	ND		0.10	0.026	mg/L			11/18/24 17:57	1
Sulfate	ND		1.0	0.76	mg/L			11/18/24 17:57	1

Lab Sample ID: LCS 180-484597/46
Matrix: Water
Analysis Batch: 484597

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	53.1		mg/L		106	80 - 120
Fluoride	2.50	2.56		mg/L		103	80 - 120
Sulfate	50.0	46.6		mg/L		93	80 - 120

Lab Sample ID: MB 180-484626/6
Matrix: Water
Analysis Batch: 484626

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			11/18/24 12:02	1
Fluoride	ND		0.10	0.026	mg/L			11/18/24 12:02	1
Sulfate	ND		1.0	0.76	mg/L			11/18/24 12:02	1

Lab Sample ID: LCS 180-484626/7
Matrix: Water
Analysis Batch: 484626

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.0		mg/L		96	80 - 120
Fluoride	2.50	2.48		mg/L		99	80 - 120
Sulfate	50.0	46.9		mg/L		94	80 - 120

Method: EPA 6010D - Metals (ICP)

Lab Sample ID: MB 240-636024/1-A
Matrix: Water
Analysis Batch: 636324

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 04:15	1

Lab Sample ID: LCS 240-636024/2-A
Matrix: Water
Analysis Batch: 636324

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	0.991		mg/L		99	80 - 120

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-636024/1-A
Matrix: Water
Analysis Batch: 636305

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 18:04	1
Arsenic	ND		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 18:04	1
Barium	ND		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 18:04	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 18:04	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 18:04	1
Calcium	ND		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 18:04	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 18:04	1
Cobalt	ND		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 18:04	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 18:04	1
Molybdenum	ND		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 18:04	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 18:04	1
Thallium	ND		0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 18:04	1

Lab Sample ID: MB 240-636024/1-A
Matrix: Water
Analysis Batch: 636847

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/26/24 10:07	1

Lab Sample ID: LCS 240-636024/3-A
Matrix: Water
Analysis Batch: 636305

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.100	0.101		mg/L		101	80 - 120
Arsenic	1.00	1.02		mg/L		102	80 - 120
Barium	1.00	0.987		mg/L		99	80 - 120
Beryllium	0.500	0.473		mg/L		95	80 - 120
Cadmium	0.500	0.482		mg/L		96	80 - 120
Calcium	25.0	25.4		mg/L		102	80 - 120
Chromium	0.500	0.489		mg/L		98	80 - 120
Cobalt	0.500	0.486		mg/L		97	80 - 120
Lithium	0.500	0.505		mg/L		101	80 - 120
Molybdenum	0.500	0.488		mg/L		98	80 - 120
Selenium	1.00	1.02		mg/L		102	80 - 120
Thallium	1.00	1.39	*+	mg/L		139	80 - 120

Lab Sample ID: LCS 240-636024/3-A
Matrix: Water
Analysis Batch: 636847

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 636024

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.500	0.498		mg/L		100	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-636031/1-A
Matrix: Water
Analysis Batch: 636245

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 636031

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 10:10	1

Lab Sample ID: LCS 240-636031/2-A
Matrix: Water
Analysis Batch: 636245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 636031

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00477		mg/L		95	80 - 120

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-484553/1
Matrix: Water
Analysis Batch: 484553

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		99	99 - 101

Lab Sample ID: LCS 180-485167/24
Matrix: Water
Analysis Batch: 485167

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-485174/1
Matrix: Water
Analysis Batch: 485174

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 180-182730-4 DU
Matrix: Water
Analysis Batch: 485174

Client Sample ID: WAP-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.1	HF	7.1		SU		0	2

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

Lab Sample ID: MB 180-484512/1
Matrix: Water
Analysis Batch: 484512

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		10	10	mg/L			11/15/24 13:16	1

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

Lab Sample ID: LCS 180-484512/2
Matrix: Water
Analysis Batch: 484512

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	417	404		mg/L		97	85 - 115

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-689592/1-A
Matrix: Water
Analysis Batch: 693477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 689592

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.01346	U	0.0465	0.0465	1.00	0.0923	pCi/L	11/20/24 09:57	12/13/24 14:03	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*30 - 110*	*11/20/24 09:57*	*12/13/24 14:03*	*1*

Lab Sample ID: LCS 160-689592/2-A
Matrix: Water
Analysis Batch: 693486

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 689592

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	9.58	9.561		1.03	1.00	0.131	pCi/L	100	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*89.1*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-689594/1-A
Matrix: Water
Analysis Batch: 692133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 689594

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.01839	U	0.256	0.256	1.00	0.495	pCi/L	11/20/24 10:00	12/06/24 12:15	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*30 - 110*	*11/20/24 10:00*	*12/06/24 12:15*	*1*
Y Carrier	*79.3*		*30 - 110*	*11/20/24 10:00*	*12/06/24 12:15*	*1*

Lab Sample ID: LCS 160-689594/2-A
Matrix: Water
Analysis Batch: 692133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 689594

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	8.28	10.36		1.44	1.00	0.604	pCi/L	125	75 - 125

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-689594/2-A
Matrix: Water
Analysis Batch: 692133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 689594

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	89.1		30 - 110
Y Carrier	78.1		30 - 110

HPLC/IC

Analysis Batch: 484597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-1	WAP-8D	Total/NA	Water	EPA 9056A	
180-182730-2	WAP-8I	Total/NA	Water	EPA 9056A	
180-182730-3	WAP-8S	Total/NA	Water	EPA 9056A	
180-182730-3	WAP-8S	Total/NA	Water	EPA 9056A	
MB 180-484597/45	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-484597/46	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 484626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-4	WAP-1	Total/NA	Water	EPA 9056A	
180-182730-4	WAP-1	Total/NA	Water	EPA 9056A	
MB 180-484626/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-484626/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 636024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-1	WAP-8D	Total Recoverable	Water	3005A	
180-182730-2	WAP-8I	Total Recoverable	Water	3005A	
180-182730-3	WAP-8S	Total Recoverable	Water	3005A	
180-182730-4	WAP-1	Total Recoverable	Water	3005A	
MB 240-636024/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-636024/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-636024/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 636031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-1	WAP-8D	Total/NA	Water	7470A	
180-182730-2	WAP-8I	Total/NA	Water	7470A	
180-182730-3	WAP-8S	Total/NA	Water	7470A	
180-182730-4	WAP-1	Total/NA	Water	7470A	
MB 240-636031/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-636031/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 636245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-1	WAP-8D	Total/NA	Water	EPA 7470A	636031
180-182730-2	WAP-8I	Total/NA	Water	EPA 7470A	636031
180-182730-3	WAP-8S	Total/NA	Water	EPA 7470A	636031
180-182730-4	WAP-1	Total/NA	Water	EPA 7470A	636031
MB 240-636031/1-A	Method Blank	Total/NA	Water	EPA 7470A	636031
LCS 240-636031/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	636031

Analysis Batch: 636305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-1	WAP-8D	Total Recoverable	Water	EPA 6020B	636024
180-182730-2	WAP-8I	Total Recoverable	Water	EPA 6020B	636024
180-182730-3	WAP-8S	Total Recoverable	Water	EPA 6020B	636024
180-182730-4	WAP-1	Total Recoverable	Water	EPA 6020B	636024
MB 240-636024/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	636024

Metals (Continued)

Analysis Batch: 636305 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-636024/3-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	636024

Analysis Batch: 636324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-1	WAP-8D	Total Recoverable	Water	EPA 6010D	636024
180-182730-2	WAP-8I	Total Recoverable	Water	EPA 6010D	636024
180-182730-3	WAP-8S	Total Recoverable	Water	EPA 6010D	636024
180-182730-4	WAP-1	Total Recoverable	Water	EPA 6010D	636024
MB 240-636024/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	636024
LCS 240-636024/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	636024

Analysis Batch: 636748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-3	WAP-8S	Total Recoverable	Water	EPA 6020B	636024
180-182730-4	WAP-1	Total Recoverable	Water	EPA 6020B	636024

Analysis Batch: 636847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-636024/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	636024
LCS 240-636024/3-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	636024

General Chemistry

Analysis Batch: 484512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-1	WAP-8D	Total/NA	Water	SM 2540C	
180-182730-2	WAP-8I	Total/NA	Water	SM 2540C	
180-182730-3	WAP-8S	Total/NA	Water	SM 2540C	
180-182730-4	WAP-1	Total/NA	Water	SM 2540C	
MB 180-484512/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-484512/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 484553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-1	WAP-8D	Total/NA	Water	EPA 9040C	
180-182730-2	WAP-8I	Total/NA	Water	EPA 9040C	
LCS 180-484553/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 485167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-3	WAP-8S	Total/NA	Water	EPA 9040C	
LCS 180-485167/24	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 485174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-4	WAP-1	Total/NA	Water	EPA 9040C	
LCS 180-485174/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-182730-4 DU	WAP-1	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 689592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-1	WAP-8D	Total/NA	Water	PrecSep-21	
180-182730-2	WAP-8I	Total/NA	Water	PrecSep-21	
180-182730-3	WAP-8S	Total/NA	Water	PrecSep-21	
180-182730-4	WAP-1	Total/NA	Water	PrecSep-21	
MB 160-689592/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-689592/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 689594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182730-1	WAP-8D	Total/NA	Water	PrecSep_0	
180-182730-2	WAP-8I	Total/NA	Water	PrecSep_0	
180-182730-3	WAP-8S	Total/NA	Water	PrecSep_0	
180-182730-4	WAP-1	Total/NA	Water	PrecSep_0	
MB 160-689594/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-689594/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Virginia Beach Service Center

Chain of Custody Record

Virginia Beach Service Center

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Client Information	Sampler: MARK BRETING / JUN HILL	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-106632-14503.3
Client Contact: Britton Hundley	Phone: 317 313 8306	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: IN	Page: Page 3 of 3
Company: Haley & Aldrich, Inc.	PWSID:			Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
N None
D HNO3
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd TDS by 2540C	9315_Ra226, 9320_Ra228	6020B Metals by 6020B	7470A Hg by 7470A	6010D Boron by 6010D	Total Number of containers	Special Instructions/Note.
			Preservation Code:				N	N	D	D	D	D		
WAP-8D	11/12/24	1313	G	W	N	N	X	X	X	X	X	X		
WAP-8I	11/12/24	1525	G	W	N	N	X	X	X	X	X	X		
WAP-8S	11/12/24	1646	G	W	N	N	X	X	X	X	X	X		
WAP-1	11/13/24	1000	G	W	N	N	X	X	X	X	X	X		MS-sufficient volume To fill both 1 liters

180-182730 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown ☐ Radiological	☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I II III IV Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
J Hill	11 13 24/1630	ATLS		11/1/24	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
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:

Virginia Beach Service Center



180-182730 Waybill

CRAIG KA
FB CULLEY
3711 DARL

NEWBURGH,
UNITED STA

TO SAMP
EURO
301 A

PITT[illegible]BURGH PA 15238
(412) 963 [illegible]7068 REF:
INV:
PO: DEPT.

RMA.

FedEx Express

FedEx
TRK# 0221 7236 3964 0257

[illegible]DNS MON-SAT
THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

NX AGCA

15238
PA-US PIT

Uncorrected temp
Thermometer ID 1.1 17
CF -0.1 Initials
PT-WI-SR-001 effective 11/8/18
Uncorrected temp °C

#6190970 11/13 58CJ5/5B2E/C6C4

Part # 158469-494 MTW EXP 04/25 GD
58CJ5/4FB6/7E2D

CRAIG
FB CU
3711 [illegible]

NEWBUR
UNITED STATES US

JAN
3854

TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058 REF
INV:
PO: DEPT.

RMA.

FedEx Express

Uncorrected temp
Thermometer ID 2.4 17
CF -0.1 Initials
PT-WI-SR-001 effective 11/8/18
Uncorrected temp °C

FedEx
TRK# 0221 7236 3964 0279

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

NX AGCA

15238
PA-US PIT

#6190970 11/13 58CJ5/[illegible]

RT 198 1
10:30 A
FZ 197 0279
11 14



CRAIG KAISER
FB CULLEY WEST VECTREN CORP
3711 DARLINGTON RD

NEWBURGH, IN 47630
UNITED STATES US

ACTWGT: 55.00 LB MAN
CAD 0415933/CAFE3854

TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058

INV:
PO:
REF
DEPT.

RMA.

FedEx Express

FedEx
TRK# 0221 7236 3964 0235

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

NX AGCA

15238
PA-US PIT

Uncorrected temp 1.0 °C
Thermometer ID 25
CF 10.1 Initials B
PT-WI-SR-001 effective 11/8/18

#6190970 11/13 58CJ5/582E/C6C4

3711 DARLINGTON RD
NEWBURGH, IN 47630
UNITED STATES US

TO **SAMPLE RECEIVING**
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058 REF
INV.
PO. DEPT.

RMA.

FedEx Express

FedEx
TRK# 0221 **7236 3964 0268**

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

NX AGCA

15238
PA-US PIT

Uncorrected temp 2.4 °C
Thermometer ID 25
CF +0.1 Initials JB

PT-WI-SR-001 effective 11/8/18

#6190970 11/13 58CJ5/5B2E/C6C4

CRAIG KAISER
FB CULLEY WEST VECTREN CORP
3711 DARLINGTON RD
NEWBURGH, IN 47630
UNITED STATES US

ACTWGT: 55.00 LB MAN
CAD 0415933/CAFE3854

TO **SAMPLE RECEIVING**
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058 REF
INV.
PO. DEPT.

RMA.

FedEx Express

FedEx
TRK# 0221 **7236 3964 0246**

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

NX AGCA

15238
PA-US PIT

Uncorrected temp 1.2 °C
Thermometer ID 25
CF +0.1 Initials JB

PT-WI-SR-001 effective 11/8/18

#6190970 11/13 58CJ5/5B2E/C6C4

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Johnson, Andy	Carrier Tracking No(s): N/A	COC No: 180-528232.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 180-182730-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 12/19/2024			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WAP-8D (180-182730-1)	11/12/24	13:13 Eastern	G	Water			X	X	X	2	
WAP-8I (180-182730-2)	11/12/24	15:25 Eastern	G	Water			X	X	X	2	
WAP-8S (180-182730-3)	11/12/24	16:46 Eastern	G	Water			X	X	X	2	
WAP-1 (180-182730-4)	11/13/24	10:00 Eastern	G	Water			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	JMun	11-18-24 1700	EPTINE	M. Pinette	NOV 19 2024 0910	
2	Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company
3	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:

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-182730-1
SDG Number: FB Culley West

Login Number: 182730
List Number: 1
Creator: Abernathy, Eric L

List Source: Eurofins Pittsburgh

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.	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?	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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-182730-1
SDG Number: FB Culley West

Login Number: 182730
List Number: 3
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 11/19/24 01:44 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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

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1 2 3 4 5 6 7 8 9 10 11 12 13

ANALYTICAL REPORT

PREPARED FOR

Attn: Todd Plating
Haley & Aldrich, Inc.
400 Augusta Street
Suite 100
Greenville, South Carolina 29601

Generated 12/28/2024 8:03:30 AM

JOB DESCRIPTION

CCR Groundwater Monitoring FB Culley West
FB Culley West

JOB NUMBER

180-182934-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

myEOL

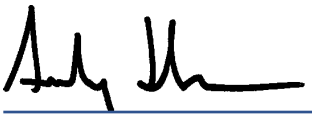
Job Notes

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



Generated
12/28/2024 8:03:30 AM

Authorized for release by
Andy Johnson, Senior Project Manager
Andy.Johnson@et.eurofinsus.com
(615)818-9567

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Job Narrative
180-182934-1

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 11/16/2024 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.0°C, 1.6°C, 2.3°C, 2.7°C, 3.5°C and 4.0°C.

Receipt Exceptions
One of the 1L nitric preserved containers did not have a sample container label.

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

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

Job ID: 180-182934-2 Eurofins Pittsburgh

Job Narrative
180-182934-2

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 11/16/2024 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.0°C, 1.6°C, 2.3°C, 2.7°C, 3.5°C and 4.0°C.

Receipt Exceptions
One of the 1L nitric preserved containers did not have a sample container label.

HPLC/IC
Method 9056A_ORGFM_28D: The following samples were diluted to bring the concentration of target analytes within the calibration range: CCR-AP-7 (180-182934-5), CCR-AP-7 (180-182934-5[MS]) and CCR-AP-7 (180-182934-5[MSD]). Elevated reporting limits (RLs) are provided.

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

Metals
Method 6020B - Total Recoverable: The laboratory control sample (LCS) for preparation batch 240-636027 and analytical batch 240-636305 recovered outside control limits for the following analytes: Thallium. These analytes were biased high in the LCS and were below the reporting limit in the associated samples; therefore, the data have been reported.

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.

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182934-1
SDG: FB Culley West

Qualifiers

Metals

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182934-1
SDG: FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-28-25
California	State	2891	04-30-24 *
Connecticut	State	PH-0688	09-30-24 *
Florida	NELAP	E871008	06-30-25
Georgia	State	PA 02-00416	04-30-25
Illinois	NELAP	004375	07-31-25
Kansas	NELAP	E-10350	01-31-25
Kentucky (UST)	State	162013	04-30-25
Kentucky (WW)	State	KY98043	12-31-24
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-25
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-24
New Hampshire	NELAP	2030	04-04-25
New Jersey	NELAP	PA005	06-30-25
New York	NELAP	11182	04-01-25
North Carolina (WW/SW)	State	434	12-31-24
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-25
Pennsylvania	NELAP	02-00416	04-30-25
Rhode Island	State	LAO00362	01-01-25
South Carolina	State	89014	04-30-25
Texas	NELAP	T104704528	03-31-25
US Fish & Wildlife	US Federal Programs	058448	04-30-25
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462024-14	05-31-25
Virginia	NELAP	10043	07-14-24 *
West Virginia DEP	State	142	01-31-25
Wisconsin	State	998027800	08-31-25

Laboratory: Eurofins Cleveland

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-25
Texas	NELAP	T104704517-22-19	08-31-25
USDA	US Federal Programs	P330-18-00281	01-05-27

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

Eurofins Pittsburgh

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 180-182934-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Laboratory: Eurofins Cleveland (Continued)

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

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-24

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-08-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-25
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-25
North Carolina (DW)	State	29700	07-31-25
North Dakota	State	R-207	12-31-24
Oklahoma	NELAP	9997	12-31-24
Oregon	NELAP	4157	09-01-25
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

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

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182934-1
SDG: FB Culley West

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-182934-1	WAP-6S	Water	11/14/24 09:20	11/16/24 09:30
180-182934-2	WAP-9S	Water	11/14/24 10:50	11/16/24 09:30
180-182934-3	WAP-9I	Water	11/14/24 12:00	11/16/24 09:30
180-182934-4	WAP-9D	Water	11/14/24 13:40	11/16/24 09:30
180-182934-5	CCR-AP-7	Water	11/15/24 06:15	11/16/24 09:30

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182934-1
SDG: FB Culley West

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Client Sample ID: WAP-6S
Lab Sample ID: 180-182934-1
Date Collected: 11/14/24 09:20
Matrix: Water
Date Received: 11/16/24 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484985	11/21/24 12:33	SJM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/21/24 23:54	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 17:27	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636445	11/22/24 16:56	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636036	11/20/24 14:00	S4FJ	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 13:13	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484994	11/21/24 07:41	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484645	11/18/24 10:34	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			988.59 mL	1.0 g	690428	11/25/24 09:39	BCE	EET SL
Total/NA	Analysis	9315		1			694324	12/18/24 21:30	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			988.59 mL	1.0 g	690429	11/25/24 09:42	BCE	EET SL
Total/NA	Analysis	9320		1			693487	12/13/24 11:42	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			695373	12/26/24 09:30	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-9S
Lab Sample ID: 180-182934-2
Date Collected: 11/14/24 10:50
Matrix: Water
Date Received: 11/16/24 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484985	11/21/24 13:17	SJM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/21/24 23:58	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 17:36	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636445	11/22/24 16:59	AJC	EET CLE
	Instrument ID: I14									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182934-1
SDG: FB Culley West

Client Sample ID: WAP-9S

Date Collected: 11/14/24 10:50
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			50 mL	50 mL	636036	11/20/24 14:00	S4FJ	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 13:15	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484994	11/21/24 07:36	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484667	11/18/24 11:43	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			738.96 mL	1.0 g	690428	11/25/24 09:39	BCE	EET SL
Total/NA	Analysis	9315		1			694324	12/18/24 21:30	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			738.96 mL	1.0 g	690429	11/25/24 09:42	BCE	EET SL
Total/NA	Analysis	9320		1			693487	12/13/24 11:42	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			695373	12/26/24 09:30	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-9I

Date Collected: 11/14/24 12:00
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484985	11/21/24 13:32	SJM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 00:03	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 17:38	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636445	11/22/24 17:02	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636036	11/20/24 14:00	S4FJ	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 13:16	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484994	11/21/24 09:08	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484659	11/18/24 11:34	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			998.85 mL	1.0 g	690428	11/25/24 09:39	BCE	EET SL
Total/NA	Analysis	9315		1			694324	12/18/24 21:30	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Prep	PrecSep_0			998.85 mL	1.0 g	690429	11/25/24 09:42	BCE	EET SL
Total/NA	Analysis	9320		1			693487	12/13/24 11:42	FLC	EET SL
	Instrument ID: GFPCPURPLE									

Client Sample ID: WAP-9I
Date Collected: 11/14/24 12:00
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1			695373	12/26/24 09:30	FLC	EET SL

Client Sample ID: WAP-9D
Date Collected: 11/14/24 13:40
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	484985	11/21/24 13:47	SJM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/22/24 00:07	RKT	EET CLE
	Instrument ID: I12									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 17:41	AJC	EET CLE
	Instrument ID: I14									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636445	11/22/24 17:04	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636036	11/20/24 14:00	S4FJ	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 13:22	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			484994	11/21/24 10:12	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484667	11/18/24 11:43	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			986.99 mL	1.0 g	690430	11/25/24 09:43	BCE	EET SL
Total/NA	Analysis	9315		1			694357	12/18/24 18:09	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			986.99 mL	1.0 g	690431	11/25/24 09:46	BCE	EET SL
Total/NA	Analysis	9320		1			693477	12/13/24 11:27	FLC	EET SL
	Instrument ID: GFPCRED									
Total/NA	Analysis	Ra226_Ra228		1			695373	12/26/24 09:30	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: CCR-AP-7
Date Collected: 11/15/24 06:15
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		2.5	1 mL	1 mL	484985	11/21/24 14:02	SJM	EET PIT
	Instrument ID: CHICS2100B									
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6010D		1			636324	11/21/24 22:42	RKT	EET CLE
	Instrument ID: I12									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-182934-1
SDG: FB Culley West

Client Sample ID: CCR-AP-7

Date Collected: 11/15/24 06:15
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	636027	11/20/24 14:00	S4FJ	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			636305	11/21/24 16:35	AJC	EET CLE
	Instrument ID: I14									
Total/NA	Prep	7470A			50 mL	50 mL	636036	11/20/24 14:00	S4FJ	EET CLE
Total/NA	Analysis	EPA 7470A		1			636245	11/21/24 12:47	TQ6W	EET CLE
	Instrument ID: H11									
Total/NA	Analysis	EPA 9040C		1			485167	11/23/24 09:44	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	484659	11/18/24 11:34	EBA	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			999.65 mL	1.0 g	690430	11/25/24 09:43	BCE	EET SL
Total/NA	Analysis	9315		1			694357	12/18/24 18:10	SCB	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			999.65 mL	1.0 g	690431	11/25/24 09:46	BCE	EET SL
Total/NA	Analysis	9320		1			693477	12/13/24 11:28	FLC	EET SL
	Instrument ID: GFPCRED									
Total/NA	Analysis	Ra226_Ra228		1			695373	12/26/24 09:30	FLC	EET SL
	Instrument ID: NOEQUIP									

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET CLE
- Batch Type: Prep
  - S4FJ = Katherine Wise
- Batch Type: Analysis
  - AJC = Alexander Colosi
  - RKT = Roger Toth
  - TQ6W = Bryan Perelka

Lab: EET PIT
- Batch Type: Analysis
  - BAB = Brooke Batyi
  - EBA = Elizabeth Arbster
  - SJM = Shannon Mueller

Lab: EET SL
- Batch Type: Prep
  - BCE = Benjamin Celeslie
- Batch Type: Analysis
  - FLC = Fernando Cruz
  - SCB = Sarah Bernsen

Client Sample ID: WAP-6S

Date Collected: 11/14/24 09:20
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-1

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23**		1.0	0.71	mg/L			11/21/24 12:33	1
Fluoride	**0.76**		0.10	0.026	mg/L			11/21/24 12:33	1
Sulfate	**65**		1.0	0.76	mg/L			11/21/24 12:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.4**		0.10	0.057	mg/L		11/20/24 14:00	11/21/24 23:54	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 17:27	1
Arsenic	ND		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 17:27	1
Barium	**0.040**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 17:27	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 17:27	1
Cadmium	**0.00012**	**J**	0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 17:27	1
Calcium	**74**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 17:27	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 17:27	1
Cobalt	**0.00051**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 17:27	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/22/24 16:56	1
Lithium	**0.0035**	**J**	0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 17:27	1
Molybdenum	**0.12**		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 17:27	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 17:27	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 17:27	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 13:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**340**		10	10	mg/L			11/18/24 10:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**	**HF**	0.1	0.1	SU			11/21/24 07:41	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0833	U	0.0792	0.0795	1.00	0.121	pCi/L	11/25/24 09:39	12/18/24 21:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.3*		*30 - 110*	*11/25/24 09:39*	*12/18/24 21:30*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.440	U	0.402	0.404	1.00	0.638	pCi/L	11/25/24 09:42	12/13/24 11:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*88.3*		*30 - 110*	*11/25/24 09:42*	*12/13/24 11:42*	*1*

Client Sample ID: WAP-6S
Lab Sample ID: 180-182934-1

Date Collected: 11/14/24 09:20
Matrix: Water
Date Received: 11/16/24 09:30

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*75.9*		*30 - 110*	*11/25/24 09:42*	*12/13/24 11:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.523	U	0.410	0.412	5.00	0.638	pCi/L		12/26/24 09:30	1

Client Sample ID: WAP-9S

Date Collected: 11/14/24 10:50
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-2

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23		1.0	0.71	mg/L			11/21/24 13:17	1
Fluoride	0.53		0.10	0.026	mg/L			11/21/24 13:17	1
Sulfate	40		1.0	0.76	mg/L			11/21/24 13:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.2		0.10	0.057	mg/L		11/20/24 14:00	11/21/24 23:58	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 17:36	1
Arsenic	0.0010	J	0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 17:36	1
Barium	0.11		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 17:36	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 17:36	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 17:36	1
Calcium	70		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 17:36	1
Chromium	0.0013	J	0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 17:36	1
Cobalt	0.00071	J	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 17:36	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/22/24 16:59	1
Lithium	0.0090		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 17:36	1
Molybdenum	0.10		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 17:36	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 17:36	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 17:36	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 13:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	330		10	10	mg/L			11/18/24 11:43	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.7	HF	0.1	0.1	SU			11/21/24 07:36	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.256		0.132	0.134	1.00	0.158	pCi/L	11/25/24 09:39	12/18/24 21:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*30 - 110*	*11/25/24 09:39*	*12/18/24 21:30*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.827		0.499	0.505	1.00	0.731	pCi/L	11/25/24 09:42	12/13/24 11:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*30 - 110*	*11/25/24 09:42*	*12/13/24 11:42*	*1*

Client Sample ID: WAP-9S
Date Collected: 11/14/24 10:50
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-2
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*83.0*		*30 - 110*	*11/25/24 09:42*	*12/13/24 11:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.08**		0.516	0.522	5.00	0.731	pCi/L		12/26/24 09:30	1

Client Sample ID: WAP-9I
Date Collected: 11/14/24 12:00
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-3
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29**		1.0	0.71	mg/L			11/21/24 13:32	1
Fluoride	**0.14**		0.10	0.026	mg/L			11/21/24 13:32	1
Sulfate	**42**		1.0	0.76	mg/L			11/21/24 13:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.13**		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 00:03	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 17:38	1
Arsenic	**0.0073**		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 17:38	1
Barium	**0.14**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 17:38	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 17:38	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 17:38	1
Calcium	**49**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 17:38	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 17:38	1
Cobalt	**0.00025**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 17:38	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/22/24 17:02	1
Lithium	**0.0042**	**J**	0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 17:38	1
Molybdenum	**0.0080**		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 17:38	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 17:38	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 17:38	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 13:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**260**		10	10	mg/L			11/18/24 11:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.6**	**HF**	0.1	0.1	SU			11/21/24 09:08	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0954	U	0.0794	0.0799	1.00	0.118	pCi/L	11/25/24 09:39	12/18/24 21:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*30 - 110*	*11/25/24 09:39*	*12/18/24 21:30*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.791**		0.372	0.379	1.00	0.490	pCi/L	11/25/24 09:42	12/13/24 11:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*101*		*30 - 110*	*11/25/24 09:42*	*12/13/24 11:42*	*1*

Client Sample ID: WAP-9I
Date Collected: 11/14/24 12:00
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-3
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*76.3*		*30 - 110*	*11/25/24 09:42*	*12/13/24 11:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.886**		0.380	0.387	5.00	0.490	pCi/L		12/26/24 09:30	1

Client Sample ID: WAP-9D

Date Collected: 11/14/24 13:40
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-4

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24**		1.0	0.71	mg/L			11/21/24 13:47	1
Fluoride	**0.14**		0.10	0.026	mg/L			11/21/24 13:47	1
Sulfate	**43**		1.0	0.76	mg/L			11/21/24 13:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		11/20/24 14:00	11/22/24 00:07	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 17:41	1
Arsenic	**0.0054**		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 17:41	1
Barium	**0.19**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 17:41	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 17:41	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 17:41	1
Calcium	**42**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 17:41	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 17:41	1
Cobalt	**0.000088**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 17:41	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/22/24 17:04	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 17:41	1
Molybdenum	**0.0022**	**J**	0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 17:41	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 17:41	1
Thallium	ND	*+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 17:41	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 13:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**210**		10	10	mg/L			11/18/24 11:43	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.6**	**HF**	0.1	0.1	SU			11/21/24 10:12	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.403**		0.153	0.157	1.00	0.172	pCi/L	11/25/24 09:43	12/18/24 18:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.9*		*30 - 110*	*11/25/24 09:43*	*12/18/24 18:09*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.605	U	0.419	0.423	1.00	0.632	pCi/L	11/25/24 09:46	12/13/24 11:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.9*		*30 - 110*	*11/25/24 09:46*	*12/13/24 11:27*	*1*

Client Sample ID: WAP-9D
Lab Sample ID: 180-182934-4

Date Collected: 11/14/24 13:40
Matrix: Water
Date Received: 11/16/24 09:30

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Y Carrier	72.5		30 - 110	11/25/24 09:46	12/13/24 11:27	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.01		0.446	0.451	5.00	0.632	pCi/L		12/26/24 09:30	1

Client Sample ID: CCR-AP-7

Date Collected: 11/15/24 06:15
Date Received: 11/16/24 09:30

Lab Sample ID: 180-182934-5

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**43**		2.5	1.8	mg/L			11/21/24 14:02	2.5
Fluoride	**0.41**		0.25	0.065	mg/L			11/21/24 14:02	2.5
Sulfate	**86**		2.5	1.9	mg/L			11/21/24 14:02	2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		11/20/24 14:00	11/21/24 22:42	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 16:35	1
Arsenic	**0.0042**	**J**	0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 16:35	1
Barium	**0.12**		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 16:35	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 16:35	1
Cadmium	**0.000097**	**J**	0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 16:35	1
Calcium	**120**		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 16:35	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 16:35	1
Cobalt	**0.00036**	**J**	0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 16:35	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/21/24 16:35	1
Lithium	**0.0098**		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 16:35	1
Molybdenum	**0.0011**	**J**	0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 16:35	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 16:35	1
Thallium	ND	F1 *+	0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 16:35	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00032**	**F1**	0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 12:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**600**		10	10	mg/L			11/18/24 11:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.1**	**HF**	0.1	0.1	SU			11/23/24 09:44	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.496**		0.163	0.169	1.00	0.155	pCi/L	11/25/24 09:43	12/18/24 18:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.6*		*30 - 110*	*11/25/24 09:43*	*12/18/24 18:10*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.358	U	0.506	0.507	1.00	0.849	pCi/L	11/25/24 09:46	12/13/24 11:28	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*71.6*		*30 - 110*	*11/25/24 09:46*	*12/13/24 11:28*	*1*

Client Sample ID: CCR-AP-7
Lab Sample ID: 180-182934-5

Date Collected: 11/15/24 06:15
Matrix: Water
Date Received: 11/16/24 09:30

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*76.6*		*30 - 110*	*11/25/24 09:46*	*12/13/24 11:28*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.854**		0.532	0.534	5.00	0.849	pCi/L		12/26/24 09:30	1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-484985/6
Matrix: Water
Analysis Batch: 484985

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			11/21/24 11:58	1
Fluoride	ND		0.10	0.026	mg/L			11/21/24 11:58	1
Sulfate	ND		1.0	0.76	mg/L			11/21/24 11:58	1

Lab Sample ID: LCS 180-484985/7
Matrix: Water
Analysis Batch: 484985

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	48.9		mg/L		98	80 - 120		
Fluoride			2.50	2.57		mg/L		103	80 - 120		
Sulfate			50.0	50.8		mg/L		102	80 - 120		

Lab Sample ID: 180-182934-1 MS
Matrix: Water
Analysis Batch: 484985

Client Sample ID: WAP-6S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	23		50.0	74.7		mg/L		104	80 - 120		
Fluoride	0.76		2.50	3.28		mg/L		101	80 - 120		
Sulfate	65		50.0	117		mg/L		105	80 - 120		

Lab Sample ID: 180-182934-1 MSD
Matrix: Water
Analysis Batch: 484985

Client Sample ID: WAP-6S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	23		50.0	73.3		mg/L		101	80 - 120	2	15
Fluoride	0.76		2.50	3.24		mg/L		99	80 - 120	1	15
Sulfate	65		50.0	114		mg/L		99	80 - 120	2	15

Lab Sample ID: 180-182934-5 MS
Matrix: Water
Analysis Batch: 484985

Client Sample ID: CCR-AP-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	43		125	169		mg/L		101	80 - 120		
Fluoride	0.41		6.25	6.82		mg/L		102	80 - 120		
Sulfate	86		125	214		mg/L		103	80 - 120		

Lab Sample ID: 180-182934-5 MSD
Matrix: Water
Analysis Batch: 484985

Client Sample ID: CCR-AP-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	43		125	168		mg/L		101	80 - 120	0	15
Fluoride	0.41		6.25	6.68		mg/L		100	80 - 120	2	15
Sulfate	86		125	210		mg/L		100	80 - 120	2	15

Method: EPA 6010D - Metals (ICP)

Lab Sample ID: MB 240-636027/1-A
Matrix: Water
Analysis Batch: 636324

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 636027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.10	0.057	mg/L		11/20/24 14:00	11/21/24 22:25	1

Lab Sample ID: LCS 240-636027/2-A
Matrix: Water
Analysis Batch: 636324

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 636027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	1.04		mg/L		104	80 - 120

Lab Sample ID: 180-182934-5 MS
Matrix: Water
Analysis Batch: 636324

Client Sample ID: CCR-AP-7
Prep Type: Total Recoverable
Prep Batch: 636027

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	ND		1.00	0.992		mg/L		99	75 - 125

Lab Sample ID: 180-182934-5 MSD
Matrix: Water
Analysis Batch: 636324

Client Sample ID: CCR-AP-7
Prep Type: Total Recoverable
Prep Batch: 636027

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	ND		1.00	1.02		mg/L		102	75 - 125	2	20

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-636027/1-A
Matrix: Water
Analysis Batch: 636305

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 636027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/20/24 14:00	11/21/24 16:29	1
Arsenic	ND		0.0050	0.00075	mg/L		11/20/24 14:00	11/21/24 16:29	1
Barium	ND		0.0050	0.00077	mg/L		11/20/24 14:00	11/21/24 16:29	1
Beryllium	ND		0.0010	0.00027	mg/L		11/20/24 14:00	11/21/24 16:29	1
Cadmium	ND		0.0010	0.000077	mg/L		11/20/24 14:00	11/21/24 16:29	1
Calcium	ND		1.0	0.25	mg/L		11/20/24 14:00	11/21/24 16:29	1
Chromium	ND		0.0050	0.0012	mg/L		11/20/24 14:00	11/21/24 16:29	1
Cobalt	ND		0.0010	0.000086	mg/L		11/20/24 14:00	11/21/24 16:29	1
Lead	ND		0.0010	0.00045	mg/L		11/20/24 14:00	11/21/24 16:29	1
Lithium	ND		0.0080	0.0034	mg/L		11/20/24 14:00	11/21/24 16:29	1
Molybdenum	ND		0.0050	0.0011	mg/L		11/20/24 14:00	11/21/24 16:29	1
Selenium	ND		0.0050	0.00089	mg/L		11/20/24 14:00	11/21/24 16:29	1
Thallium	ND		0.0010	0.00051	mg/L		11/20/24 14:00	11/21/24 16:29	1

Lab Sample ID: LCS 240-636027/3-A
Matrix: Water
Analysis Batch: 636305

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 636027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.100	0.103		mg/L		103	80 - 120

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-636027/3-A
Matrix: Water
Analysis Batch: 636305

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 636027

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			1.00	0.959		mg/L		96	80 - 120		
Barium			1.00	0.986		mg/L		99	80 - 120		
Beryllium			0.500	0.505		mg/L		101	80 - 120		
Cadmium			0.500	0.487		mg/L		97	80 - 120		
Calcium			25.0	24.8		mg/L		99	80 - 120		
Chromium			0.500	0.507		mg/L		101	80 - 120		
Cobalt			0.500	0.506		mg/L		101	80 - 120		
Lead			0.500	0.502		mg/L		100	80 - 120		
Lithium			0.500	0.505		mg/L		101	80 - 120		
Molybdenum			0.500	0.478		mg/L		96	80 - 120		
Selenium			1.00	0.980		mg/L		98	80 - 120		
Thallium			1.00	1.37	*+	mg/L		137	80 - 120		

Lab Sample ID: 180-182934-5 MS
Matrix: Water
Analysis Batch: 636305

Client Sample ID: CCR-AP-7
Prep Type: Total Recoverable
Prep Batch: 636027

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony	ND		0.100	0.103		mg/L		103	80 - 120		
Arsenic	0.0042	J	1.00	1.01		mg/L		101	80 - 120		
Barium	0.12		1.00	1.13		mg/L		101	80 - 120		
Beryllium	ND		0.500	0.489		mg/L		98	80 - 120		
Cadmium	0.000097	J	0.500	0.482		mg/L		96	80 - 120		
Calcium	120		25.0	139	4	mg/L		88	80 - 120		
Chromium	ND		0.500	0.488		mg/L		98	80 - 120		
Cobalt	0.00036	J	0.500	0.486		mg/L		97	80 - 120		
Lead	ND		0.500	0.491		mg/L		98	80 - 120		
Lithium	0.0098		0.500	0.519		mg/L		102	80 - 120		
Molybdenum	0.0011	J	0.500	0.496		mg/L		99	80 - 120		
Selenium	ND		1.00	0.979		mg/L		98	80 - 120		
Thallium	ND	F1 *+	1.00	1.37	F1	mg/L		137	80 - 120		

Lab Sample ID: 180-182934-5 MSD
Matrix: Water
Analysis Batch: 636305

Client Sample ID: CCR-AP-7
Prep Type: Total Recoverable
Prep Batch: 636027

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		0.100	0.104		mg/L		104	80 - 120	1	20
Arsenic	0.0042	J	1.00	1.01		mg/L		101	80 - 120	0	20
Barium	0.12		1.00	1.12		mg/L		101	80 - 120	0	20
Beryllium	ND		0.500	0.489		mg/L		98	80 - 120	0	20
Cadmium	0.000097	J	0.500	0.484		mg/L		97	80 - 120	0	20
Calcium	120		25.0	141	4	mg/L		96	80 - 120	1	20
Chromium	ND		0.500	0.502		mg/L		100	80 - 120	3	20
Cobalt	0.00036	J	0.500	0.492		mg/L		98	80 - 120	1	20
Lead	ND		0.500	0.496		mg/L		99	80 - 120	1	20
Lithium	0.0098		0.500	0.520		mg/L		102	80 - 120	0	20
Molybdenum	0.0011	J	0.500	0.503		mg/L		101	80 - 120	1	20
Selenium	ND		1.00	0.990		mg/L		99	80 - 120	1	20

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-182934-5 MSD
Matrix: Water
Analysis Batch: 636305

Client Sample ID: CCR-AP-7
Prep Type: Total Recoverable
Prep Batch: 636027

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Thallium	ND	F1 *+	1.00	1.41	F1	mg/L		141	80 - 120	3	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-636036/1-A
Matrix: Water
Analysis Batch: 636245

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 636036

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/20/24 14:00	11/21/24 12:44	1

Lab Sample ID: LCS 240-636036/2-A
Matrix: Water
Analysis Batch: 636245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 636036

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.00489		mg/L		98	80 - 120

Lab Sample ID: 180-182934-5 MS
Matrix: Water
Analysis Batch: 636245

Client Sample ID: CCR-AP-7
Prep Type: Total/NA
Prep Batch: 636036

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00032	F1	0.00100	0.00104	F1	mg/L		72	80 - 120

Lab Sample ID: 180-182934-5 MSD
Matrix: Water
Analysis Batch: 636245

Client Sample ID: CCR-AP-7
Prep Type: Total/NA
Prep Batch: 636036

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00032	F1	0.00100	0.000978	F1	mg/L		66	80 - 120	6	20

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-484994/1
Matrix: Water
Analysis Batch: 484994

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-484994/24
Matrix: Water
Analysis Batch: 484994

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Method: EPA 9040C - pH (Continued)

Lab Sample ID: LCS 180-485167/24
Matrix: Water
Analysis Batch: 485167

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

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

Lab Sample ID: MB 180-484645/2
Matrix: Water
Analysis Batch: 484645

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		10	10	mg/L			11/18/24 10:34	1

Lab Sample ID: LCS 180-484645/1
Matrix: Water
Analysis Batch: 484645

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	417	394		mg/L		94	85 - 115

Lab Sample ID: MB 180-484659/1
Matrix: Water
Analysis Batch: 484659

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		10	10	mg/L			11/18/24 11:34	1

Lab Sample ID: LCS 180-484659/2
Matrix: Water
Analysis Batch: 484659

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	417	402		mg/L		96	85 - 115

Lab Sample ID: MB 180-484667/1
Matrix: Water
Analysis Batch: 484667

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		10	10	mg/L			11/18/24 11:43	1

Lab Sample ID: LCS 180-484667/2
Matrix: Water
Analysis Batch: 484667

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	417	386		mg/L		93	85 - 115

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-690428/1-A
Matrix: Water
Analysis Batch: 694358

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 690428

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.06482	U	0.0645	0.0647	1.00	0.160	pCi/L	11/25/24 09:39	12/18/24 19:10	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*85.5*		*30 - 110*	*11/25/24 09:39*	*12/18/24 19:10*	*1*

Lab Sample ID: LCS 160-690428/2-A
Matrix: Water
Analysis Batch: 694358

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 690428

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	8.809		0.963	1.00	0.141	pCi/L	92	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.7*		*30 - 110*

Lab Sample ID: MB 160-690430/1-A
Matrix: Water
Analysis Batch: 694357

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 690430

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02793	U	0.0747	0.0747	1.00	0.140	pCi/L	11/25/24 09:43	12/18/24 18:09	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*81.5*		*30 - 110*	*11/25/24 09:43*	*12/18/24 18:09*	*1*

Lab Sample ID: LCS 160-690430/2-A
Matrix: Water
Analysis Batch: 694357

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 690430

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	9.247		1.02	1.00	0.121	pCi/L	97	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*87.6*		*30 - 110*

Lab Sample ID: 180-182934-5 DU
Matrix: Water
Analysis Batch: 694357

Client Sample ID: CCR-AP-7
Prep Type: Total/NA
Prep Batch: 690430

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.496			0.3573		0.150	1.00	0.165	pCi/L			0.43	1

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 180-182934-5 DU
Matrix: Water
Analysis Batch: 694357

Client Sample ID: CCR-AP-7
Prep Type: Total/NA
Prep Batch: 690430

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	83.2		30 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-690429/1-A
Matrix: Water
Analysis Batch: 693486

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 690429

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.1335	U	0.343	0.343	1.00	0.673	pCi/L	11/25/24 09:42	12/13/24 11:42	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		30 - 110	11/25/24 09:42	12/13/24 11:42	1
Y Carrier	76.6		30 - 110	11/25/24 09:42	12/13/24 11:42	1

Lab Sample ID: LCS 160-690429/2-A
Matrix: Water
Analysis Batch: 693486

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 690429

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.27	9.617		1.32	1.00	0.543	pCi/L	116	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	94.7		30 - 110
Y Carrier	79.6		30 - 110

Lab Sample ID: MB 160-690431/1-A
Matrix: Water
Analysis Batch: 693477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 690431

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2666	U	0.347	0.348	1.00	0.578	pCi/L	11/25/24 09:46	12/13/24 11:27	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	81.5		30 - 110	11/25/24 09:46	12/13/24 11:27	1
Y Carrier	82.2		30 - 110	11/25/24 09:46	12/13/24 11:27	1

Lab Sample ID: LCS 160-690431/2-A
Matrix: Water
Analysis Batch: 693477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 690431

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			8.27	9.885		1.37	1.00	0.548	pCi/L	120	75 - 125		

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-690431/2-A
Matrix: Water
Analysis Batch: 693477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 690431

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	87.6		30 - 110
Y Carrier	79.3		30 - 110

Lab Sample ID: 180-182934-5 DU
Matrix: Water
Analysis Batch: 693477

Client Sample ID: CCR-AP-7
Prep Type: Total/NA
Prep Batch: 690431

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.358	U		0.07544	U	0.335	1.00	0.610	pCi/L			0.34	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	83.2		30 - 110
Y Carrier	77.4		30 - 110

HPLC/IC

Analysis Batch: 484985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total/NA	Water	EPA 9056A	
180-182934-2	WAP-9S	Total/NA	Water	EPA 9056A	
180-182934-3	WAP-9I	Total/NA	Water	EPA 9056A	
180-182934-4	WAP-9D	Total/NA	Water	EPA 9056A	
180-182934-5	CCR-AP-7	Total/NA	Water	EPA 9056A	
MB 180-484985/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-484985/7	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-182934-1 MS	WAP-6S	Total/NA	Water	EPA 9056A	
180-182934-1 MSD	WAP-6S	Total/NA	Water	EPA 9056A	
180-182934-5 MS	CCR-AP-7	Total/NA	Water	EPA 9056A	
180-182934-5 MSD	CCR-AP-7	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 636027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total Recoverable	Water	3005A	
180-182934-2	WAP-9S	Total Recoverable	Water	3005A	
180-182934-3	WAP-9I	Total Recoverable	Water	3005A	
180-182934-4	WAP-9D	Total Recoverable	Water	3005A	
180-182934-5	CCR-AP-7	Total Recoverable	Water	3005A	
MB 240-636027/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-636027/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-636027/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-182934-5 MS	CCR-AP-7	Total Recoverable	Water	3005A	
180-182934-5 MS	CCR-AP-7	Total Recoverable	Water	3005A	
180-182934-5 MSD	CCR-AP-7	Total Recoverable	Water	3005A	
180-182934-5 MSD	CCR-AP-7	Total Recoverable	Water	3005A	

Prep Batch: 636036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total/NA	Water	7470A	
180-182934-2	WAP-9S	Total/NA	Water	7470A	
180-182934-3	WAP-9I	Total/NA	Water	7470A	
180-182934-4	WAP-9D	Total/NA	Water	7470A	
180-182934-5	CCR-AP-7	Total/NA	Water	7470A	
MB 240-636036/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-636036/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-182934-5 MS	CCR-AP-7	Total/NA	Water	7470A	
180-182934-5 MSD	CCR-AP-7	Total/NA	Water	7470A	

Analysis Batch: 636245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total/NA	Water	EPA 7470A	636036
180-182934-2	WAP-9S	Total/NA	Water	EPA 7470A	636036
180-182934-3	WAP-9I	Total/NA	Water	EPA 7470A	636036
180-182934-4	WAP-9D	Total/NA	Water	EPA 7470A	636036
180-182934-5	CCR-AP-7	Total/NA	Water	EPA 7470A	636036
MB 240-636036/1-A	Method Blank	Total/NA	Water	EPA 7470A	636036
LCS 240-636036/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	636036
180-182934-5 MS	CCR-AP-7	Total/NA	Water	EPA 7470A	636036

Metals (Continued)

Analysis Batch: 636245 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-5 MSD	CCR-AP-7	Total/NA	Water	EPA 7470A	636036

Analysis Batch: 636305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total Recoverable	Water	EPA 6020B	636027
180-182934-2	WAP-9S	Total Recoverable	Water	EPA 6020B	636027
180-182934-3	WAP-9I	Total Recoverable	Water	EPA 6020B	636027
180-182934-4	WAP-9D	Total Recoverable	Water	EPA 6020B	636027
180-182934-5	CCR-AP-7	Total Recoverable	Water	EPA 6020B	636027
MB 240-636027/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	636027
LCS 240-636027/3-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	636027
180-182934-5 MS	CCR-AP-7	Total Recoverable	Water	EPA 6020B	636027
180-182934-5 MSD	CCR-AP-7	Total Recoverable	Water	EPA 6020B	636027

Analysis Batch: 636324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total Recoverable	Water	EPA 6010D	636027
180-182934-2	WAP-9S	Total Recoverable	Water	EPA 6010D	636027
180-182934-3	WAP-9I	Total Recoverable	Water	EPA 6010D	636027
180-182934-4	WAP-9D	Total Recoverable	Water	EPA 6010D	636027
180-182934-5	CCR-AP-7	Total Recoverable	Water	EPA 6010D	636027
MB 240-636027/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	636027
LCS 240-636027/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	636027
180-182934-5 MS	CCR-AP-7	Total Recoverable	Water	EPA 6010D	636027
180-182934-5 MSD	CCR-AP-7	Total Recoverable	Water	EPA 6010D	636027

Analysis Batch: 636445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total Recoverable	Water	EPA 6020B	636027
180-182934-2	WAP-9S	Total Recoverable	Water	EPA 6020B	636027
180-182934-3	WAP-9I	Total Recoverable	Water	EPA 6020B	636027
180-182934-4	WAP-9D	Total Recoverable	Water	EPA 6020B	636027

General Chemistry

Analysis Batch: 484645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total/NA	Water	SM 2540C	
MB 180-484645/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-484645/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 484659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-3	WAP-9I	Total/NA	Water	SM 2540C	
180-182934-5	CCR-AP-7	Total/NA	Water	SM 2540C	
MB 180-484659/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-484659/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 484667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-2	WAP-9S	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 484667 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-4	WAP-9D	Total/NA	Water	SM 2540C	
MB 180-484667/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-484667/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 484994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total/NA	Water	EPA 9040C	
180-182934-2	WAP-9S	Total/NA	Water	EPA 9040C	
180-182934-3	WAP-9I	Total/NA	Water	EPA 9040C	
180-182934-4	WAP-9D	Total/NA	Water	EPA 9040C	
LCS 180-484994/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
LCS 180-484994/24	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 485167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-5	CCR-AP-7	Total/NA	Water	EPA 9040C	
LCS 180-485167/24	Lab Control Sample	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 690428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total/NA	Water	PrecSep-21	
180-182934-2	WAP-9S	Total/NA	Water	PrecSep-21	
180-182934-3	WAP-9I	Total/NA	Water	PrecSep-21	
MB 160-690428/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-690428/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 690429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-1	WAP-6S	Total/NA	Water	PrecSep_0	
180-182934-2	WAP-9S	Total/NA	Water	PrecSep_0	
180-182934-3	WAP-9I	Total/NA	Water	PrecSep_0	
MB 160-690429/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-690429/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 690430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-4	WAP-9D	Total/NA	Water	PrecSep-21	
180-182934-5	CCR-AP-7	Total/NA	Water	PrecSep-21	
MB 160-690430/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-690430/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-182934-5 DU	CCR-AP-7	Total/NA	Water	PrecSep-21	

Prep Batch: 690431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-182934-4	WAP-9D	Total/NA	Water	PrecSep_0	
180-182934-5	CCR-AP-7	Total/NA	Water	PrecSep_0	
MB 160-690431/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-690431/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-182934-5 DU	CCR-AP-7	Total/NA	Water	PrecSep_0	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

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Client Information	Sampler: Jon Hall	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-106632-14503.2
Client Contact: Britton Hundley	Phone: 317-473-1325	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: IN	Page: Page 2 of 3
Company: Haley & Aldrich, Inc.	PWSID:			Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes: N None; D HNO3

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd TDS by 2540C	9315_Ra226, 9320_Ra228	6020B Metals by 6020B	7470A Hg by 7470A	6010D Boron by 6010D	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D	D		
MAP-6S	11.14.24	0920	G	W										
MAP-9S		1050												
MAP-9I		1200												
MAP-9D		1340												
CCR-AP-7	11.15.24	0615												
MS-2		0615												CCR-AP-7
MSD-2		0615												" " "

180-182934 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	J Hall	11-15-24/0800			11/16/24 0930	EPITAUS
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	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:

Ver: 05/06/2024



180-182934 Waybill

Do Not Lift Using This Tag

Ref
Dep

Date 17Oct24
Wgt 55 00 LBS

DV

SHIPPING 0 00
SPECIAL 0 00
HANDLING 0 00
0 00 TOTAL

Svce: PRIORITY OVERNIGHT Master 7236 3963 9470
TRCK 7236 3963 9481

ORIGIN ID ORFA (317) 579-4082
CRAIG KAISER
FB CULLEY VECTREN CORP
3711 DARLINGTON RD

NEWBURGH, IN 47630
UNITED STATES US

SHIP DATE 17OCT24
ACTWGT 55.00 LB MAN
CAD 0415933/CAFE3854

Part # 158469-434 MTW EXP 04/25

TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7068 REF
INV:
PO: DEPT:

RMA.

FedEx Xpress

FedEx
TRK# 0221 7236 3963 9481

SATURDAY 12:00P
PRIORITY OVERNIGH

15238
PA-US PIT

XO AGCA

Uncorrected temp
Thermometer ID 4.1 17 °C
CF -0.1 Initials

PT-WI-SR-001 effective 11/8/18

#6190970 11/15 5BCJ5/582E/C6C4

CRAIG KAISER
FB CULLEY WEST VECTREN CORP
3711 DARLINGTON RD

NEWBURGH, IN 47630
UNITED STATES US

ACTWGT 55 00 LB MAN
CAD 0415933/CAFE3854

Part # 158469-434 MTW EXP 04/25

TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-7068 REF
INV:
PO: DEPT:

RMA.

Uncorrected temp
Thermometer ID 1.7 17 °C
CF -0.1 Initials

PT-WI-SR-001 effective 11/8/18

FedEx Express

FedEx
TRK# 0221 7236 3964 0280

RETURNS MON SAT
SATURDAY 12:00P
PRIORITY OVERNIGHT

15238
PA-US PIT

XO AGCA

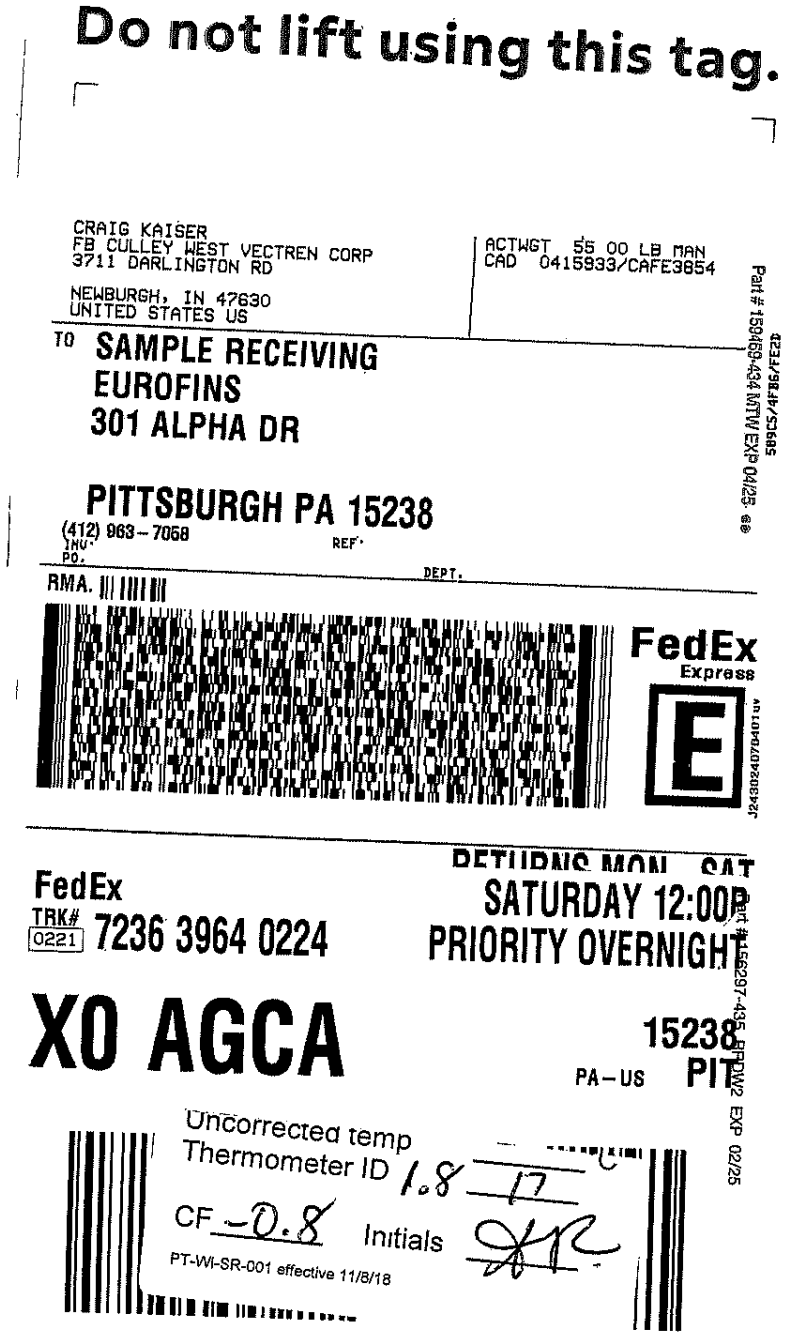
Part # 158297-435 FRDW2 EXP 04/25

FedEx Express

SDR

Saturday Delivery

151966LL 10/24



Do not lift using this tag.

CRAIG KAISER
FB CULLEY WEST VECTREN CORP
3711 DARLINGTON RD

NEWBURGH, IN 47630
UNITED STATES US

ACTWGT 55.00 LB MAN
CAD 0415933/CAFE3854

TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058
INV.
PO.
REF.
DEPT.

RMA.

FedEx Express

FedEx
TRK# 0221 7236 3964 0224

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO AGCA

15238
PA-US PIT

Uncorrected temp
Thermometer ID 1.8 17
CF -0.8 Initials
PT-WI-SR-001 effective 11/8/18

#6180623 11/15 58CJ5/5B2E/C6C4

Part # 156969-434 MTW EXP 04/25

Part # 156297-435 BRDW2 EXP 02/25



CRAIG KAISER
FB CULLEY VECTREN CORP
3711 DARLINGTON RD

NEWBURGH, IN 47630
UNITED STATES US

ACTWGT 55.00 LB MAN
CAD 0415933/CAFE3854

TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058
INV.
PO.
REF.
DEPT.

RMA.

FedEx Express

FedEx
TRK# 0221 7236 3963 9492

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO AGCA

15238
PA-US PIT

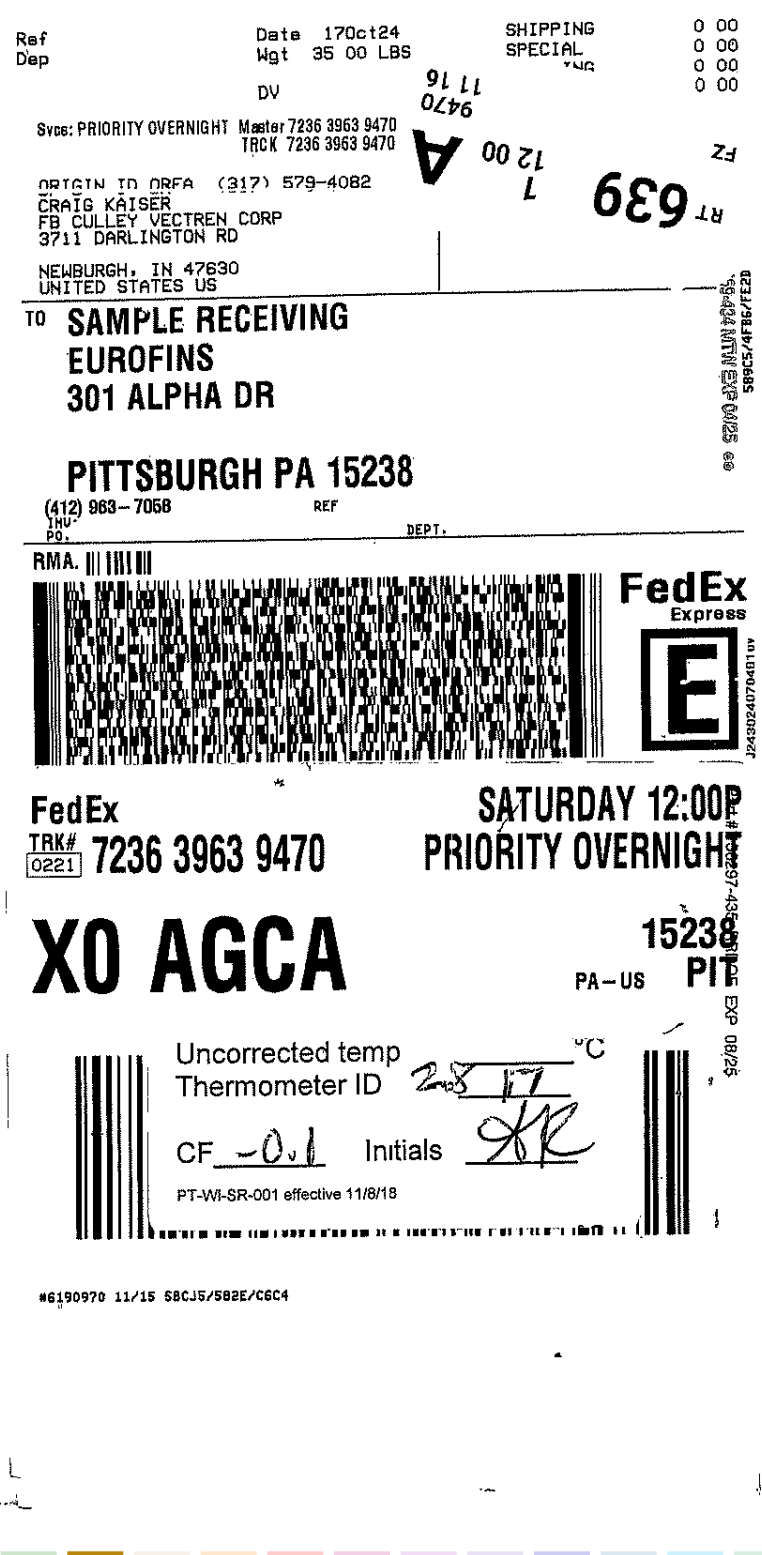
Uncorrected temp
Thermometer ID 3.6 17
CF -0.1 Initials
PT-WI-SR-001 effective 11/8/18

#6190970 11/15 58CJ

Part # 156969-434 MTW EXP 04/25

Part # 156297-435 BRDW2 EXP 08/26


ACTWGT: 55 00 LB MAN
CAD 0415933/CAFE3854
CRAIG KAISER
FB CULLEY VECTREN CORP
3711 DARLINGTON RD
NEWBURGH, IN 47630
UNITED STATES US
TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR
PITTSBURGH PA 15238
(412) 963-7058
REF
INV.
PO.
DEPT.
RMA.
FedEx
Express
FedEx
TRK# 0221 7236 3963 9518
SATURDAY 12:00
PRIORITY OVERNIGH
XO AGCA
15238
PA-US
PIT
Uncorrected temp
Thermometer ID 24
°C
17
CF -0.1
Initials
PT-WI-SR-001 effective 11/8/18
#6190970 11/15 5BCJ5/5B2E/C6C4


Ref
Dep
Date 17Oct24
Wgt 35 00 LBS
SHIPPING
SPECIAL
0 00
0 00
0 00
0 00
DV
Svce: PRIORITY OVERNIGHT Master 7236 3963 9470
TRCK 7236 3963 9470
ORIGIN ID ORFA (317) 579-4082
CRAIG KAISER
FB CULLEY VECTREN CORP
3711 DARLINGTON RD
NEWBURGH, IN 47630
UNITED STATES US
TO SAMPLE RECEIVING
EUROFINS
301 ALPHA DR
PITTSBURGH PA 15238
(412) 963-7058
REF
INV.
PO.
DEPT.
RMA.
FedEx
Express
FedEx
TRK# 0221 7236 3963 9470
SATURDAY 12:00
PRIORITY OVERNIGH
XO AGCA
15238
PA-US
PIT
Uncorrected temp
Thermometer ID 24
°C
17
CF -0.1
Initials
PT-WI-SR-001 effective 11/8/18
#6190970 11/15 5BCJ5/5B2E/C6C4

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Johnson, Andy	Carrier Tracking No(s): N/A	COC No: 180-528237.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 180-182934-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 12/26/2024			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: CCR Groundwater Monitoring FB Culley West	Project #: 18016014			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WAP-6S (180-182934-1)	11/14/24	09:20 Eastern	G	Water			X	X	X	2	
WAP-9S (180-182934-2)	11/14/24	10:50 Eastern	G	Water			X	X	X	2	
WAP-9I (180-182934-3)	11/14/24	12:00 Eastern	G	Water			X	X	X	2	
WAP-9D (180-182934-4)	11/14/24	13:40 Eastern	G	Water			X	X	X	2	
CCR-AP-7 (180-182934-5)	11/15/24	06:15 Eastern	G	Water			X	X	X	2	
CCR-AP-7 (180-182934-5DU)	11/15/24	06:15 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 11-18-24 1200	Company ET/PTS	Received by: M. Pinetta	Date/Time: NOV 19 2024 0910	Company
Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company
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:

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-182934-1
SDG Number: FB Culley West

Login Number: 182934
List Number: 1
Creator: Abernathy, Eric L

List Source: Eurofins Pittsburgh

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.	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?	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.	False	
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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-182934-1
SDG Number: FB Culley West

Login Number: 182934
List Number: 3
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 11/19/24 04:21 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.	N/A	
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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11 12 13

ANALYTICAL REPORT

PREPARED FOR

Attn: Todd Plating
Haley & Aldrich, Inc.
400 Augusta Street
Suite 100
Greenville, South Carolina 29601

Generated 6/23/2025 5:52:34 PM

JOB DESCRIPTION

CCR Groundwater Monitoring FB Culley West
FB Culley West

JOB NUMBER

180-190515-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

myEOL

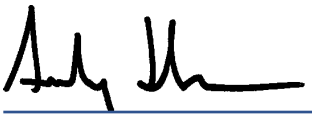
Job Notes

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



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6/23/2025 5:52:34 PM

Authorized for release by
Andy Johnson, Senior Project Manager
Andy.Johnson@et.eurofinsus.com
(615)818-9567

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Job Narrative
180-190515-1

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 5/15/2025 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.5°C, 2.0°C, 2.3°C and 2.7°C.

Receipt Exceptions
More samples are present on the chain however only the samples that are being analyzed have the information filled in. WAP-4S (180-190515-1), WAP-4I (180-190515-2), WAP-4D (180-190515-3), WAP-5S (180-190515-4), WAP-5I (180-190515-5), WAP-5D (180-190515-6), WAP-6S (180-190515-7), WAP-6I (180-190515-8), WAP-6D (180-190515-9), WAP-6D (180-190515-9[DU]), WAP-6D (180-190515-9[MS]), WAP-6D (180-190515-9[MSD]), WAP-9S (180-190515-10), WAP-9I (180-190515-11), WAP-9D (180-190515-12), DUP-1 (180-190515-13), DUP-2 (180-190515-14) and FIELD BLANK 1 (180-190515-15)

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

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

Job ID: 180-190515-2 Eurofins Pittsburgh

Job Narrative
180-190515-2

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 5/15/2025 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.5°C, 2.0°C, 2.3°C and 2.7°C.

Receipt Exceptions
More samples are present on the chain however only the samples that are being analyzed have the information filled in. WAP-4S (180-190515-1), WAP-4I (180-190515-2), WAP-4D (180-190515-3), WAP-5S (180-190515-4), WAP-5I (180-190515-5), WAP-5D (180-190515-6), WAP-6S (180-190515-7), WAP-6I (180-190515-8), WAP-6D (180-190515-9), WAP-6D (180-190515-9[DU]), WAP-6D (180-190515-9[MS]), WAP-6D (180-190515-9[MSD]), WAP-9S (180-190515-10), WAP-9I (180-190515-11), WAP-9D (180-190515-12), DUP-1 (180-190515-13), DUP-2 (180-190515-14) and FIELD BLANK 1 (180-190515-15)

HPLC/IC
Method 9056A_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 180-496509 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: WAP-6I (180-190515-8), WAP-9S (180-190515-10), WAP-9I (180-190515-11) and WAP-9D (180-190515-12). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: WAP-4S (180-190515-1) and WAP-6S (180-190515-7). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following sample was diluted to bring the concentration of target analytes within the calibration range: WAP-5S (180-190515-4). Elevated reporting limits (RLs) are provided.

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.

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00690	06-28-25
California	State	2891	04-30-24 *
Connecticut	State	PH-0820	09-30-26
Florida	NELAP	E871008	06-30-25
Georgia	State	PA 02-00416	04-30-26
Illinois	NELAP	200005	07-31-25
Kansas	NELAP	E-10350	01-31-26
Kentucky (UST)	State	162013	04-30-26
Kentucky (WW)	State	KY98043	12-31-25
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-25
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-25
New Hampshire	NELAP	2030	04-04-26
New Jersey	NELAP	PA005	06-30-25
New York	NELAP	11182	03-31-26
North Carolina (WW/SW)	State	434	12-31-25
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-26
Pennsylvania	NELAP	02-00416	04-30-26
Rhode Island	State	LAO00375	12-30-25
South Carolina	State	89014	04-30-25 *
Texas	NELAP	T104704528	03-31-26
US Fish & Wildlife	US Federal Programs	A21930	04-30-26
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462024-14	05-31-25
Virginia	NELAP	460189	09-14-25
West Virginia DEP	State	142	01-31-26
Wisconsin	State	998027800	08-31-25

Laboratory: Eurofins Cleveland

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

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	05-26-25
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 180-190515-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Laboratory: Eurofins Cleveland (Continued)

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-26
Alaska	State	PA00009	06-30-25
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-26
Arkansas DEQ	State	88-00660	08-09-25
California	State	2792	01-31-26
Colorado	State	PA00009	06-30-25
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-26
Delaware (DW)	State	N/A	01-31-26
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-26
Illinois	NELAP	200027	01-31-26
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-25
Kentucky (DW)	State	KY90088	12-31-25
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-25
Louisiana (All)	NELAP	02055	06-30-25
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-26
Minnesota	NELAP	042-999-487	12-31-25
Mississippi	State	023	01-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-26
Nebraska	State	NE-OS-32-17	01-31-26
New Hampshire	NELAP	2730	01-10-26
New Jersey	NELAP	PA011	06-30-25
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-25
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-25
Oregon	NELAP	PA200001	09-11-25

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

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	36-00037	01-31-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-25
South Carolina	State	89002	01-31-26
Tennessee	State	02838	01-31-26
Texas	NELAP	T104704194-23-46	08-31-25
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-25
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26
West Virginia (DW)	State	9906 C	03-31-26
West Virginia DEP	State	055	07-31-25
Wyoming	State	8TMS-L	01-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-25
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	08-02-25
North Dakota	State	R-207	06-30-25
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25

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

Client: Haley & Aldrich, Inc.
Job ID: 180-190515-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Laboratory: Eurofins St. Louis (Continued)

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

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-26
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-190515-1	WAP-4S	Water	05/13/25 11:25	05/15/25 09:00
180-190515-2	WAP-4I	Water	05/13/25 12:20	05/15/25 09:00
180-190515-3	WAP-4D	Water	05/13/25 13:30	05/15/25 09:00
180-190515-4	WAP-5S	Water	05/13/25 07:40	05/15/25 09:00
180-190515-5	WAP-5I	Water	05/13/25 08:45	05/15/25 09:00
180-190515-6	WAP-5D	Water	05/13/25 10:20	05/15/25 09:00
180-190515-7	WAP-6S	Water	05/14/25 10:45	05/15/25 09:00
180-190515-8	WAP-6I	Water	05/14/25 09:50	05/15/25 09:00
180-190515-9	WAP-6D	Water	05/14/25 08:45	05/15/25 09:00
180-190515-10	WAP-9S	Water	05/14/25 14:40	05/15/25 09:00
180-190515-11	WAP-9I	Water	05/14/25 13:15	05/15/25 09:00
180-190515-12	WAP-9D	Water	05/14/25 12:00	05/15/25 09:00
180-190515-13	DUP-1	Water	05/13/25 00:00	05/15/25 09:00
180-190515-14	DUP-2	Water	05/13/25 00:00	05/15/25 09:00
180-190515-15	FIELD BLANK 1	Water	05/14/25 08:00	05/15/25 09:00

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Client Sample ID: WAP-4S
Date Collected: 05/13/25 11:25
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496568	05/25/25 09:25	M1D	EET PIT
	Instrument ID: INTEGRION									
Total/NA	Analysis	EPA 9056A		10	1 mL	1 mL	496625	05/27/25 13:42	ERP	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647282	05/27/25 09:30	X3ZX	ELLE
Total Recoverable	Analysis	EPA 6010D		5			650329	05/29/25 09:57	MT26	ELLE
	Instrument ID: T74 - 23745									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 22:42	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647166	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 15:29	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496279	05/20/25 16:29	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1007.91 mL	1.0 g	719399	05/27/25 08:31	OGC	EET SL
Total/NA	Analysis	9315		1			723367	06/19/25 07:44	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1007.91 mL	1.0 g	719400	05/27/25 08:37	OGC	EET SL
Total/NA	Analysis	9320		1			723121	06/18/25 11:42	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			723866	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-4I
Date Collected: 05/13/25 12:20
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496568	05/25/25 09:44	M1D	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	650590	05/29/25 22:30	UAMX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			650879	05/30/25 07:31	MT26	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 22:45	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	651139	05/31/25 01:40	UAMX	ELLE
Total/NA	Analysis	EPA 7470A		1			651956	06/02/25 20:44	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496279	05/20/25 16:33	BAB	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Client Sample ID: WAP-4I

Date Collected: 05/13/25 12:20
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
Total/NA	Prep	PrecSep-21			1000.75 mL	1.0 g	719399	05/27/25 08:31	OGC	EET SL
Total/NA	Analysis	9315		1			723367	06/19/25 07:44	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.75 mL	1.0 g	719400	05/27/25 08:37	OGC	EET SL
Total/NA	Analysis	9320		1			723121	06/18/25 11:42	FLC	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Analysis	Ra226_Ra228		1			723866	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-4D

Date Collected: 05/13/25 13:30
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496568	05/25/25 06:20	M1D	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647282	05/27/25 09:30	X3ZX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			649737	05/28/25 11:10	MT26	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 22:47	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647168	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 20:08	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 09:49	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1004.12 mL	1.0 g	719399	05/27/25 08:31	OGC	EET SL
Total/NA	Analysis	9315		1			723367	06/19/25 07:44	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1004.12 mL	1.0 g	719400	05/27/25 08:37	OGC	EET SL
Total/NA	Analysis	9320		1			723168	06/18/25 11:39	FLC	EET SL
	Instrument ID: GFPCPROTEAN									
Total/NA	Analysis	Ra226_Ra228		1			723866	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Client Sample ID: WAP-5S

Date Collected: 05/13/25 07:40
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496568	05/25/25 08:11	M1D	EET PIT
	Instrument ID: INTEGRION									
Total/NA	Analysis	EPA 9056A		10	1 mL	1 mL	496568	05/25/25 08:30	M1D	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647282	05/27/25 09:30	X3ZX	ELLE
Total Recoverable	Analysis	EPA 6010D		2			650329	05/29/25 10:00	MT26	ELLE
	Instrument ID: T74 - 23745									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 22:50	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647166	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 15:30	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496279	05/20/25 16:36	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1000.23 mL	1.0 g	719399	05/27/25 08:31	OGC	EET SL
Total/NA	Analysis	9315		1			723367	06/19/25 07:44	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.23 mL	1.0 g	719400	05/27/25 08:37	OGC	EET SL
Total/NA	Analysis	9320		1			723168	06/18/25 11:39	FLC	EET SL
	Instrument ID: GFPCPROTEAN									
Total/NA	Analysis	Ra226_Ra228		1			723866	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-5I

Date Collected: 05/13/25 08:45
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496568	05/25/25 10:02	M1D	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647282	05/27/25 09:30	X3ZX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			649737	05/28/25 11:00	MT26	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 22:52	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647166	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 15:25	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 09:36	BAB	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Client Sample ID: WAP-5I

Date Collected: 05/13/25 08:45
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
Total/NA	Prep	PrecSep-21			1000.16 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723605	06/20/25 16:06	SWS	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1000.16 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723611	06/20/25 11:44	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-5D

Date Collected: 05/13/25 10:20
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496568	05/25/25 10:21	M1D	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647282	05/27/25 09:30	X3ZX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			649737	05/28/25 11:16	MT26	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 22:55	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647166	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 15:27	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 09:39	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1007.36 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723605	06/20/25 16:06	SWS	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1007.36 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723611	06/20/25 11:44	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-6S
Lab Sample ID: 180-190515-7
Date Collected: 05/14/25 10:45
Matrix: Water
Date Received: 05/15/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	496625	05/27/25 14:00	ERP	EET PIT
	Instrument ID: INTEGRION									
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496509	05/24/25 02:28	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647072	05/27/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			650016	05/28/25 13:38	MT26	ELLE
	Instrument ID: T74 - 23745									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 22:58	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647168	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 20:04	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 09:42	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1001.89 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723605	06/20/25 16:06	SWS	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1001.89 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723611	06/20/25 11:45	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-6I
Lab Sample ID: 180-190515-8
Date Collected: 05/14/25 09:50
Matrix: Water
Date Received: 05/15/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		2	1 mL	1 mL	496509	05/23/25 14:56	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647282	05/27/25 09:30	X3ZX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			649737	05/28/25 11:19	MT26	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 23:05	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647166	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 15:40	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 09:46	BAB	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Client Sample ID: WAP-6I

Date Collected: 05/14/25 09:50
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
Total/NA	Prep	PrecSep-21			1000.78 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723605	06/20/25 16:06	SWS	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1000.78 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723611	06/20/25 11:45	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-6D

Date Collected: 05/14/25 08:45
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496509	05/23/25 11:57	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647282	05/27/25 09:30	X3ZX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			649737	05/28/25 10:33	MT26	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 22:24	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647168	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 19:18	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 09:30	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1002.99 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723605	06/20/25 16:06	SWS	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1002.99 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723611	06/20/25 11:46	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-9S
Lab Sample ID: 180-190515-10
Date Collected: 05/14/25 14:40
Matrix: Water
Date Received: 05/15/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496509	05/23/25 15:11	ERP	EET PIT
	Instrument ID: INUVION									
Total/NA	Analysis	EPA 9056A		10	1 mL	1 mL	496509	05/23/25 15:27	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647282	05/27/25 09:30	X3ZX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			649737	05/28/25 11:13	MT26	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 23:08	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647168	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 20:00	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 09:52	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1011.06 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723605	06/20/25 16:06	SWS	EET SL
	Instrument ID: GFPCPURPLE									
Total/NA	Prep	PrecSep_0			1011.06 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723611	06/20/25 11:46	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-9I
Lab Sample ID: 180-190515-11
Date Collected: 05/14/25 13:15
Matrix: Water
Date Received: 05/15/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		2	1 mL	1 mL	496509	05/23/25 15:42	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	650590	05/29/25 22:30	UAMX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			650879	05/30/25 07:43	MT26	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 23:10	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	651139	05/31/25 01:40	UAMX	ELLE
Total/NA	Analysis	EPA 7470A		1			651956	06/02/25 20:50	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 09:55	BAB	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-9I
Date Collected: 05/14/25 13:15
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
Total/NA	Prep	PrecSep-21			1000.69 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723622	06/20/25 16:10	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.69 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723611	06/20/25 11:46	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-9D
Date Collected: 05/14/25 12:00
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		2	1 mL	1 mL	496509	05/23/25 15:58	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647072	05/27/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			650016	05/28/25 13:41	MT26	ELLE
	Instrument ID: T74 - 23745									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 23:13	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647166	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 15:38	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 09:58	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1003.51 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723622	06/20/25 16:10	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1003.51 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723611	06/20/25 11:46	SCB	EET SL
	Instrument ID: GFPCRED									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-1
Lab Sample ID: 180-190515-13

Date Collected: 05/13/25 00:00
Matrix: Water
Date Received: 05/15/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496568	05/25/25 10:58	M1D	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647072	05/27/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			650016	05/28/25 13:47	MT26	ELLE
	Instrument ID: T74 - 23745									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 23:16	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647166	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 15:46	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 10:05	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1005.71 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723622	06/20/25 16:10	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1005.71 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723622	06/20/25 11:55	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-2
Lab Sample ID: 180-190515-14

Date Collected: 05/13/25 00:00
Matrix: Water
Date Received: 05/15/25 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496568	05/25/25 11:16	M1D	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647072	05/27/25 22:00	UAMX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			650016	05/28/25 13:44	MT26	ELLE
	Instrument ID: T74 - 23745									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 23:18	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647166	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 15:36	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 10:11	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Client Sample ID: DUP-2

Date Collected: 05/13/25 00:00
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1001.55 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723622	06/20/25 16:10	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1001.55 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723622	06/20/25 11:55	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: FIELD BLANK 1

Date Collected: 05/14/25 08:00
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496509	05/23/25 22:18	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	647282	05/27/25 09:30	X3ZX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			649737	05/28/25 11:22	MT26	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	656927	05/21/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657192	05/22/25 23:21	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	647168	05/28/25 09:20	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			649992	05/28/25 20:06	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496326	05/21/25 10:14	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496195	05/19/25 16:40	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1000.15 mL	1.0 g	719394	05/27/25 08:21	OGC	EET SL
Total/NA	Analysis	9315		1			723622	06/20/25 16:10	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1000.15 mL	1.0 g	719396	05/27/25 08:27	OGC	EET SL
Total/NA	Analysis	9320		1			723622	06/20/25 11:55	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			723865	06/23/25 10:17	SCB	EET SL
	Instrument ID: NOEQUIP									

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190515-1
SDG: FB Culley West

Analyst References:

Lab: EET CLE
- Batch Type: Prep
  - BN = Benjamin Norman
- Batch Type: Analysis
  - S4FJ = Katherine Wise

Lab: EET PIT
- Batch Type: Analysis
  - BAB = Brooke Batyi
  - ERP = Evan Papak
  - M1D = Maureen Donlin
  - SNR = Sabra Richart

Lab: EET SL
- Batch Type: Prep
  - OGC = Olivia Carr
- Batch Type: Analysis
  - FLC = Fernando Cruz
  - SCB = Sarah Bernsen
  - SWS = Seth Stubblefield

Lab: ELLE
- Batch Type: Prep
  - UAMX = Annamaria Kuhns
  - X3ZX = Skyler Ruf
- Batch Type: Analysis
  - IJ3I = Elizabeth Brittingham
  - MT26 = Jason Knight

Client Sample ID: WAP-4S

Date Collected: 05/13/25 11:25
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-1

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	82		10	7.1	mg/L			05/27/25 13:42	10
Fluoride	0.15		0.10	0.026	mg/L			05/25/25 09:25	1
Sulfate	320		10	7.6	mg/L			05/27/25 13:42	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	12		0.25	0.060	mg/L		05/27/25 09:30	05/29/25 09:57	5

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00060	J	0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 22:42	1
Arsenic	0.0089		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 22:42	1
Barium	0.058		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 22:42	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 22:42	1
Cadmium	0.00015	J	0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 22:42	1
Calcium	220		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 22:42	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 22:42	1
Cobalt	0.0014		0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 22:42	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 22:42	1
Lithium	0.0067	J	0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 22:42	1
Molybdenum	0.42		0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 22:42	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 22:42	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 22:42	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 15:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	900		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.4	HF	0.1	0.1	SU			05/20/25 16:29	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.275		0.187	0.189	1.00	0.250	pCi/L	05/27/25 08:31	06/19/25 07:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.4*		*30 - 110*	*05/27/25 08:31*	*06/19/25 07:44*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.196	U	0.311	0.312	1.00	0.533	pCi/L	05/27/25 08:37	06/18/25 11:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.4*		*30 - 110*	*05/27/25 08:37*	*06/18/25 11:42*	*1*

Client Sample ID: WAP-4S
Date Collected: 05/13/25 11:25
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-1
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*80.7*		*30 - 110*	*05/27/25 08:37*	*06/18/25 11:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.471	U	0.363	0.365	5.00	0.533	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-4I
Date Collected: 05/13/25 12:20
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-2
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26**		1.0	0.71	mg/L			05/25/25 09:44	1
Fluoride	**0.13**		0.10	0.026	mg/L			05/25/25 09:44	1
Sulfate	**45**		1.0	0.76	mg/L			05/25/25 09:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.037**	**J**	0.050	0.012	mg/L		05/29/25 22:30	05/30/25 07:31	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 22:45	1
Arsenic	**0.0047**	**J**	0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 22:45	1
Barium	**0.13**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 22:45	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 22:45	1
Cadmium	**0.000091**	**J**	0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 22:45	1
Calcium	**33**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 22:45	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 22:45	1
Cobalt	**0.00044**	**J**	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 22:45	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 22:45	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 22:45	1
Molybdenum	**0.0022**	**J**	0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 22:45	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 22:45	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 22:45	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/31/25 01:40	06/02/25 20:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**190**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.6**	**HF**	0.1	0.1	SU			05/20/25 16:33	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0393	U	0.140	0.141	1.00	0.269	pCi/L	05/27/25 08:31	06/19/25 07:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.8*		*30 - 110*	*05/27/25 08:31*	*06/19/25 07:44*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.193	U	0.382	0.383	1.00	0.660	pCi/L	05/27/25 08:37	06/18/25 11:42	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*83.8*		*30 - 110*	*05/27/25 08:37*	*06/18/25 11:42*	*1*

Client Sample ID: WAP-4I
Date Collected: 05/13/25 12:20
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-2
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*84.1*		*30 - 110*	*05/27/25 08:37*	*06/18/25 11:42*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.232	U	0.407	0.408	5.00	0.660	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-4D

Date Collected: 05/13/25 13:30
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-3

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23**		1.0	0.71	mg/L			05/25/25 06:20	1
Fluoride	**0.12**		0.10	0.026	mg/L			05/25/25 06:20	1
Sulfate	**27**		1.0	0.76	mg/L			05/25/25 06:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.070**		0.050	0.012	mg/L		05/27/25 09:30	05/28/25 11:10	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 22:47	1
Arsenic	**0.0098**		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 22:47	1
Barium	**0.30**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 22:47	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 22:47	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 22:47	1
Calcium	**49**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 22:47	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 22:47	1
Cobalt	**0.00018**	**J**	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 22:47	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 22:47	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 22:47	1
Molybdenum	**0.0058**		0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 22:47	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 22:47	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 22:47	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 20:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**220**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			05/21/25 09:49	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.476**		0.251	0.255	1.00	0.337	pCi/L	05/27/25 08:31	06/19/25 07:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*30 - 110*	*05/27/25 08:31*	*06/19/25 07:44*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.471	U	0.378	0.380	1.00	0.585	pCi/L	05/27/25 08:37	06/18/25 11:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*30 - 110*	*05/27/25 08:37*	*06/18/25 11:39*	*1*

Client Sample ID: WAP-4D
Lab Sample ID: 180-190515-3

Date Collected: 05/13/25 13:30
Matrix: Water
Date Received: 05/15/25 09:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*82.2*		*30 - 110*	*05/27/25 08:37*	*06/18/25 11:39*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.947**		0.454	0.458	5.00	0.585	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-5S

Date Collected: 05/13/25 07:40
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-4

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**62**		1.0	0.71	mg/L			05/25/25 08:11	1
Fluoride	**0.12**		0.10	0.026	mg/L			05/25/25 08:11	1
Sulfate	**560**		10	7.6	mg/L			05/25/25 08:30	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**6.9**		0.10	0.024	mg/L		05/27/25 09:30	05/29/25 10:00	2

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 22:50	1
Arsenic	**0.00092**	**J**	0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 22:50	1
Barium	**0.044**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 22:50	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 22:50	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 22:50	1
Calcium	**220**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 22:50	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 22:50	1
Cobalt	**0.0051**		0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 22:50	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 22:50	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 22:50	1
Molybdenum	ND		0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 22:50	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 22:50	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 22:50	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 15:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1100**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**6.9**	**HF**	0.1	0.1	SU			05/20/25 16:36	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.170	U	0.252	0.253	1.00	0.430	pCi/L	05/27/25 08:31	06/19/25 07:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.1*		*30 - 110*	*05/27/25 08:31*	*06/19/25 07:44*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.454	U	0.509	0.511	1.00	0.833	pCi/L	05/27/25 08:37	06/18/25 11:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*72.1*		*30 - 110*	*05/27/25 08:37*	*06/18/25 11:39*	*1*

Client Sample ID: WAP-5S
Lab Sample ID: 180-190515-4

Date Collected: 05/13/25 07:40
Matrix: Water
Date Received: 05/15/25 09:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*83.0*		*30 - 110*	*05/27/25 08:37*	*06/18/25 11:39*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.624	U	0.568	0.570	5.00	0.833	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-5I

Date Collected: 05/13/25 08:45
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-5

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26**		1.0	0.71	mg/L			05/25/25 10:02	1
Fluoride	**0.13**		0.10	0.026	mg/L			05/25/25 10:02	1
Sulfate	**47**		1.0	0.76	mg/L			05/25/25 10:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.042**	**J**	0.050	0.012	mg/L		05/27/25 09:30	05/28/25 11:00	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 22:52	1
Arsenic	**0.0070**		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 22:52	1
Barium	**0.094**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 22:52	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 22:52	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 22:52	1
Calcium	**35**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 22:52	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 22:52	1
Cobalt	**0.00035**	**J**	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 22:52	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 22:52	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 22:52	1
Molybdenum	**0.0017**	**J**	0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 22:52	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 22:52	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 22:52	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 15:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**200**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**	**HF**	0.1	0.1	SU			05/21/25 09:36	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.000	U	0.212	0.212	1.00	0.432	pCi/L	05/27/25 08:21	06/20/25 16:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*69.4*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.921**		0.540	0.547	1.00	0.787	pCi/L	05/27/25 08:27	06/20/25 11:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*69.4*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:44*	*1*

Client Sample ID: WAP-5I
Date Collected: 05/13/25 08:45
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-5
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*78.1*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:44*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.921**		0.580	0.587	5.00	0.787	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-5D

Date Collected: 05/13/25 10:20
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-6

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21**		1.0	0.71	mg/L			05/25/25 10:21	1
Fluoride	**0.12**		0.10	0.026	mg/L			05/25/25 10:21	1
Sulfate	**42**		1.0	0.76	mg/L			05/25/25 10:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.054**		0.050	0.012	mg/L		05/27/25 09:30	05/28/25 11:16	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 22:55	1
Arsenic	**0.011**		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 22:55	1
Barium	**0.21**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 22:55	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 22:55	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 22:55	1
Calcium	**48**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 22:55	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 22:55	1
Cobalt	ND		0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 22:55	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 22:55	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 22:55	1
Molybdenum	**0.0039**	**J**	0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 22:55	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 22:55	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 22:55	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 15:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**240**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.3**	**HF**	0.1	0.1	SU			05/21/25 09:39	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.148	U	0.222	0.223	1.00	0.381	pCi/L	05/27/25 08:21	06/20/25 16:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.4*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**1.05**		0.507	0.516	1.00	0.700	pCi/L	05/27/25 08:27	06/20/25 11:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*78.4*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:44*	*1*

Client Sample ID: WAP-5D
Lab Sample ID: 180-190515-6

Date Collected: 05/13/25 10:20
Matrix: Water
Date Received: 05/15/25 09:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*75.9*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:44*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.20**		0.553	0.562	5.00	0.700	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-6S

Date Collected: 05/14/25 10:45
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-7

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38**		1.0	0.71	mg/L			05/24/25 02:28	1
Fluoride	**0.57**		0.10	0.026	mg/L			05/24/25 02:28	1
Sulfate	**100**		5.0	3.8	mg/L			05/27/25 14:00	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.7**		0.050	0.012	mg/L		05/27/25 22:00	05/28/25 13:38	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 22:58	1
Arsenic	ND		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 22:58	1
Barium	**0.048**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 22:58	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 22:58	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 22:58	1
Calcium	**90**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 22:58	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 22:58	1
Cobalt	**0.00073**	**J**	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 22:58	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 22:58	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 22:58	1
Molybdenum	**0.12**		0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 22:58	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 22:58	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 22:58	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 20:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**400**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.2**	**HF**	0.1	0.1	SU			05/21/25 09:42	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.141	U	0.213	0.213	1.00	0.367	pCi/L	05/27/25 08:21	06/20/25 16:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.1*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**0.801**		0.475	0.480	1.00	0.680	pCi/L	05/27/25 08:27	06/20/25 11:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.1*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:45*	*1*

Client Sample ID: WAP-6S
Lab Sample ID: 180-190515-7

Date Collected: 05/14/25 10:45
Matrix: Water
Date Received: 05/15/25 09:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*78.1*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:45*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.942**		0.521	0.525	5.00	0.680	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-6I
Date Collected: 05/14/25 09:50
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-8
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21**		2.0	1.4	mg/L			05/23/25 14:56	2
Fluoride	**0.17**	**J**	0.20	0.052	mg/L			05/23/25 14:56	2
Sulfate	**34**		2.0	1.5	mg/L			05/23/25 14:56	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.085**		0.050	0.012	mg/L		05/27/25 09:30	05/28/25 11:19	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 23:05	1
Arsenic	**0.0067**		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 23:05	1
Barium	**0.20**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 23:05	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 23:05	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 23:05	1
Calcium	**40**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 23:05	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 23:05	1
Cobalt	**0.00032**	**J**	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 23:05	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 23:05	1
Lithium	**0.0038**	**J**	0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 23:05	1
Molybdenum	**0.0041**	**J**	0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 23:05	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 23:05	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 23:05	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.00010**	**J**	0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 15:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**220**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			05/21/25 09:46	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.165	U	0.218	0.219	1.00	0.366	pCi/L	05/27/25 08:21	06/20/25 16:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.3*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.234	U	0.300	0.301	1.00	0.500	pCi/L	05/27/25 08:27	06/20/25 11:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.3*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:45*	*1*

Client Sample ID: WAP-6I
Date Collected: 05/14/25 09:50
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-8
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*84.5*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:45*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.399	U	0.371	0.372	5.00	0.500	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-6D

Date Collected: 05/14/25 08:45
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-9

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25**	**F1**	1.0	0.71	mg/L			05/23/25 11:57	1
Fluoride	**0.19**		0.10	0.026	mg/L			05/23/25 11:57	1
Sulfate	**38**	**F1**	1.0	0.76	mg/L			05/23/25 11:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.053**		0.050	0.012	mg/L		05/27/25 09:30	05/28/25 10:33	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 22:24	1
Arsenic	**0.0061**		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 22:24	1
Barium	**0.20**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 22:24	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 22:24	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 22:24	1
Calcium	**42**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 22:24	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 22:24	1
Cobalt	**0.00011**	**J**	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 22:24	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 22:24	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 22:24	1
Molybdenum	**0.0028**	**J**	0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 22:24	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 22:24	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 22:24	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 19:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**210**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**	**HF**	0.1	0.1	SU			05/21/25 09:30	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.300	U	0.289	0.290	1.00	0.455	pCi/L	05/27/25 08:21	06/20/25 16:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.1*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0698	U	0.291	0.291	1.00	0.535	pCi/L	05/27/25 08:27	06/20/25 11:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.1*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:46*	*1*

Client Sample ID: WAP-6D
Lab Sample ID: 180-190515-9

Date Collected: 05/14/25 08:45
Matrix: Water
Date Received: 05/15/25 09:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*80.7*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:46*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.369	U	0.410	0.411	5.00	0.535	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-9S

Date Collected: 05/14/25 14:40
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-10

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**31**		1.0	0.71	mg/L			05/23/25 15:11	1
Fluoride	**0.58**		0.10	0.026	mg/L			05/23/25 15:11	1
Sulfate	**77**		10	7.6	mg/L			05/23/25 15:27	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.89**		0.050	0.012	mg/L		05/27/25 09:30	05/28/25 11:13	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 23:08	1
Arsenic	**0.0012**	**J**	0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 23:08	1
Barium	**0.11**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 23:08	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 23:08	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 23:08	1
Calcium	**80**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 23:08	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 23:08	1
Cobalt	**0.00071**	**J**	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 23:08	1
Lead	**0.00045**	**J**	0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 23:08	1
Lithium	**0.0094**		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 23:08	1
Molybdenum	**0.089**		0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 23:08	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 23:08	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 23:08	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 20:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**420**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			05/21/25 09:52	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.126	U	0.229	0.229	1.00	0.406	pCi/L	05/27/25 08:21	06/20/25 16:06	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*67.4*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:06*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0834	U	0.424	0.424	1.00	0.769	pCi/L	05/27/25 08:27	06/20/25 11:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*67.4*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:46*	*1*

Client Sample ID: WAP-9S
Lab Sample ID: 180-190515-10

Date Collected: 05/14/25 14:40
Matrix: Water
Date Received: 05/15/25 09:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*80.0*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:46*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.209	U	0.482	0.482	5.00	0.769	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-9I
Date Collected: 05/14/25 13:15
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-11
Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**25**		2.0	1.4	mg/L			05/23/25 15:42	2
Fluoride	**0.20**		0.20	0.052	mg/L			05/23/25 15:42	2
Sulfate	**42**		2.0	1.5	mg/L			05/23/25 15:42	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.17**		0.050	0.012	mg/L		05/29/25 22:30	05/30/25 07:43	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 23:10	1
Arsenic	**0.0068**		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 23:10	1
Barium	**0.16**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 23:10	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 23:10	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 23:10	1
Calcium	**48**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 23:10	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 23:10	1
Cobalt	**0.00028**	**J**	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 23:10	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 23:10	1
Lithium	**0.0042**	**J**	0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 23:10	1
Molybdenum	**0.0081**		0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 23:10	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 23:10	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 23:10	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/31/25 01:40	06/02/25 20:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**250**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			05/21/25 09:55	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0703	U	0.219	0.219	1.00	0.413	pCi/L	05/27/25 08:21	06/20/25 16:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.4*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:10*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.394	U	0.470	0.471	1.00	0.775	pCi/L	05/27/25 08:27	06/20/25 11:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*70.4*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:46*	*1*

Client Sample ID: WAP-9I

Date Collected: 05/14/25 13:15
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-11

Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*70.7*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:46*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.465	U	0.519	0.519	5.00	0.775	pCi/L		06/23/25 10:17	1

Client Sample ID: WAP-9D

Date Collected: 05/14/25 12:00
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-12

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23**		2.0	1.4	mg/L			05/23/25 15:58	2
Fluoride	**0.18**	**J**	0.20	0.052	mg/L			05/23/25 15:58	2
Sulfate	**37**		2.0	1.5	mg/L			05/23/25 15:58	2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.058**		0.050	0.012	mg/L		05/27/25 22:00	05/28/25 13:41	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 23:13	1
Arsenic	**0.0050**		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 23:13	1
Barium	**0.18**		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 23:13	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 23:13	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 23:13	1
Calcium	**40**		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 23:13	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 23:13	1
Cobalt	**0.00014**	**J**	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 23:13	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 23:13	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 23:13	1
Molybdenum	**0.0023**	**J**	0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 23:13	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 23:13	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 23:13	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 15:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**200**		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			05/21/25 09:58	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.307	U	0.248	0.250	1.00	0.365	pCi/L	05/27/25 08:21	06/20/25 16:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.8*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:10*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.188	U	0.348	0.348	1.00	0.603	pCi/L	05/27/25 08:27	06/20/25 11:46	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.8*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:46*	*1*

Client Sample ID: WAP-9D
Lab Sample ID: 180-190515-12

Date Collected: 05/14/25 12:00
Matrix: Water
Date Received: 05/15/25 09:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*74.4*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:46*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.494	U	0.427	0.428	5.00	0.603	pCi/L		06/23/25 10:17	1

Client Sample ID: DUP-1

Date Collected: 05/13/25 00:00
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-13

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26		1.0	0.71	mg/L			05/25/25 10:58	1
Fluoride	0.12		0.10	0.026	mg/L			05/25/25 10:58	1
Sulfate	47		1.0	0.76	mg/L			05/25/25 10:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.034	J	0.050	0.012	mg/L		05/27/25 22:00	05/28/25 13:47	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 23:16	1
Arsenic	0.0079		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 23:16	1
Barium	0.093		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 23:16	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 23:16	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 23:16	1
Calcium	33		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 23:16	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 23:16	1
Cobalt	0.00036	J	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 23:16	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 23:16	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 23:16	1
Molybdenum	0.0015	J	0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 23:16	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 23:16	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 23:16	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000087	J	0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 15:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	190		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.4	HF	0.1	0.1	SU			05/21/25 10:05	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.345	U	0.303	0.305	1.00	0.454	pCi/L	05/27/25 08:21	06/20/25 16:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*58.7*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:10*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.517	U	0.529	0.531	1.00	0.854	pCi/L	05/27/25 08:27	06/20/25 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*58.7*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:55*	*1*

Client Sample ID: DUP-1
Date Collected: 05/13/25 00:00
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-13
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*80.7*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:55*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.862**		0.610	0.612	5.00	0.854	pCi/L		06/23/25 10:17	1

Client Sample ID: DUP-2

Date Collected: 05/13/25 00:00
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-14

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27		1.0	0.71	mg/L			05/25/25 11:16	1
Fluoride	0.18		0.10	0.026	mg/L			05/25/25 11:16	1
Sulfate	45		1.0	0.76	mg/L			05/25/25 11:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.029	J	0.050	0.012	mg/L		05/27/25 22:00	05/28/25 13:44	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 23:18	1
Arsenic	0.0043	J	0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 23:18	1
Barium	0.13		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 23:18	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 23:18	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 23:18	1
Calcium	33		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 23:18	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 23:18	1
Cobalt	0.00045	J	0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 23:18	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 23:18	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 23:18	1
Molybdenum	0.0020	J	0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 23:18	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 23:18	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 23:18	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	190		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.5	HF	0.1	0.1	SU			05/21/25 10:11	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.398		0.247	0.250	1.00	0.319	pCi/L	05/27/25 08:21	06/20/25 16:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.3*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:10*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.469	U	0.362	0.364	1.00	0.555	pCi/L	05/27/25 08:27	06/20/25 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.3*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:55*	*1*

Client Sample ID: DUP-2
Lab Sample ID: 180-190515-14

Date Collected: 05/13/25 00:00
Matrix: Water
Date Received: 05/15/25 09:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*85.6*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:55*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.867**		0.438	0.442	5.00	0.555	pCi/L		06/23/25 10:17	1

Client Sample ID: FIELD BLANK 1

Date Collected: 05/14/25 08:00
Date Received: 05/15/25 09:00

Lab Sample ID: 180-190515-15

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			05/23/25 22:18	1
Fluoride	ND		0.10	0.026	mg/L			05/23/25 22:18	1
Sulfate	ND		1.0	0.76	mg/L			05/23/25 22:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/27/25 09:30	05/28/25 11:22	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 23:21	1
Arsenic	ND		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 23:21	1
Barium	ND		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 23:21	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 23:21	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 23:21	1
Calcium	ND		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 23:21	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 23:21	1
Cobalt	ND		0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 23:21	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 23:21	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 23:21	1
Molybdenum	ND		0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 23:21	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 23:21	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 23:21	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 20:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	ND		10	10	mg/L			05/19/25 16:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**9.0**	**HF**	0.1	0.1	SU			05/21/25 10:14	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0151	U	0.149	0.149	1.00	0.311	pCi/L	05/27/25 08:21	06/20/25 16:10	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.8*		*30 - 110*	*05/27/25 08:21*	*06/20/25 16:10*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.355	U	0.368	0.369	1.00	0.768	pCi/L	05/27/25 08:27	06/20/25 11:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*80.8*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:55*	*1*

Client Sample ID: FIELD BLANK 1
Lab Sample ID: 180-190515-15

Date Collected: 05/14/25 08:00
Matrix: Water
Date Received: 05/15/25 09:00

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*78.1*		*30 - 110*	*05/27/25 08:27*	*06/20/25 11:55*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.340	U	0.397	0.398	5.00	0.768	pCi/L		06/23/25 10:17	1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-496509/50
Matrix: Water
Analysis Batch: 496509

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			05/24/25 00:07	1
Fluoride	ND		0.10	0.026	mg/L			05/24/25 00:07	1
Sulfate	ND		1.0	0.76	mg/L			05/24/25 00:07	1

Lab Sample ID: MB 180-496509/6
Matrix: Water
Analysis Batch: 496509

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			05/23/25 11:22	1
Fluoride	ND		0.10	0.026	mg/L			05/23/25 11:22	1
Sulfate	ND		1.0	0.76	mg/L			05/23/25 11:22	1

Lab Sample ID: LCS 180-496509/51
Matrix: Water
Analysis Batch: 496509

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	53.8		mg/L		108	80 - 120		
Fluoride			2.50	2.54		mg/L		102	80 - 120		
Sulfate			50.0	47.4		mg/L		95	80 - 120		

Lab Sample ID: LCS 180-496509/7
Matrix: Water
Analysis Batch: 496509

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	53.6		mg/L		107	80 - 120		
Fluoride			2.50	2.55		mg/L		102	80 - 120		
Sulfate			50.0	47.3		mg/L		95	80 - 120		

Lab Sample ID: 180-190515-9 MS
Matrix: Water
Analysis Batch: 496509

Client Sample ID: WAP-6D
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	25	F1	50.0	55.2	F1	mg/L		61	80 - 120		
Fluoride	0.19		2.50	2.69		mg/L		100	80 - 120		
Sulfate	38	F1	50.0	49.8	F1	mg/L		23	80 - 120		

Lab Sample ID: 180-190515-9 MSD
Matrix: Water
Analysis Batch: 496509

Client Sample ID: WAP-6D
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25	F1	50.0	55.4	F1	mg/L		61	80 - 120	0	15
Fluoride	0.19		2.50	2.71		mg/L		101	80 - 120	1	15
Sulfate	38	F1	50.0	49.8	F1	mg/L		23	80 - 120	0	15

Method: EPA 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 180-190515-15 MS
Matrix: Water
Analysis Batch: 496509

Client Sample ID: FIELD BLANK 1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	ND		50.0	55.7		mg/L		111	80 - 120
Fluoride	ND		2.50	2.71		mg/L		108	80 - 120
Sulfate	ND		50.0	50.2		mg/L		100	80 - 120

Lab Sample ID: 180-190515-15 MSD
Matrix: Water
Analysis Batch: 496509

Client Sample ID: FIELD BLANK 1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	ND		50.0	55.9		mg/L		112	80 - 120	0	15
Fluoride	ND		2.50	2.73		mg/L		109	80 - 120	1	15
Sulfate	ND		50.0	50.2		mg/L		100	80 - 120	0	15

Lab Sample ID: MB 180-496568/47
Matrix: Water
Analysis Batch: 496568

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			05/24/25 23:52	1
Fluoride	ND		0.10	0.026	mg/L			05/24/25 23:52	1
Sulfate	ND		1.0	0.76	mg/L			05/24/25 23:52	1

Lab Sample ID: LCS 180-496568/48
Matrix: Water
Analysis Batch: 496568

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	51.1		mg/L		102	80 - 120
Fluoride	2.50	2.60		mg/L		104	80 - 120
Sulfate	50.0	50.9		mg/L		102	80 - 120

Lab Sample ID: 180-190515-3 MS
Matrix: Water
Analysis Batch: 496568

Client Sample ID: WAP-4D
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	23		50.0	74.0		mg/L		101	80 - 120
Fluoride	0.12		2.50	3.01		mg/L		116	80 - 120
Sulfate	27		50.0	77.8		mg/L		101	80 - 120

Lab Sample ID: 180-190515-3 MSD
Matrix: Water
Analysis Batch: 496568

Client Sample ID: WAP-4D
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	23		50.0	74.3		mg/L		102	80 - 120	0	15
Fluoride	0.12		2.50	2.76		mg/L		105	80 - 120	9	15
Sulfate	27		50.0	77.5		mg/L		100	80 - 120	0	15

Method: EPA 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 180-496625/6
Matrix: Water
Analysis Batch: 496625

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			05/27/25 10:38	1
Fluoride	ND		0.10	0.026	mg/L			05/27/25 10:38	1
Sulfate	ND		1.0	0.76	mg/L			05/27/25 10:38	1

Lab Sample ID: LCS 180-496625/7
Matrix: Water
Analysis Batch: 496625

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.5		mg/L		99	80 - 120
Fluoride	2.50	2.53		mg/L		101	80 - 120
Sulfate	50.0	49.7		mg/L		99	80 - 120

Method: EPA 6010D - Metals (ICP)

Lab Sample ID: MB 410-647072/1-A
Matrix: Water
Analysis Batch: 650016

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 647072

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/27/25 22:00	05/28/25 12:52	1

Lab Sample ID: LCS 410-647072/2-A
Matrix: Water
Analysis Batch: 650016

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 647072

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.500	0.488		mg/L		98	83 - 119

Lab Sample ID: MB 410-647282/1-A
Matrix: Water
Analysis Batch: 649737

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 647282

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/27/25 09:30	05/28/25 10:27	1

Lab Sample ID: LCS 410-647282/2-A
Matrix: Water
Analysis Batch: 649737

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 647282

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.500	0.501		mg/L		100	83 - 119

Lab Sample ID: 180-190515-9 MS
Matrix: Water
Analysis Batch: 649737

Client Sample ID: WAP-6D
Prep Type: Total Recoverable
Prep Batch: 647282

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.053		0.500	0.549		mg/L		99	75 - 125

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

Lab Sample ID: 180-190515-9 MSD
Matrix: Water
Analysis Batch: 649737

Client Sample ID: WAP-6D
Prep Type: Total Recoverable
Prep Batch: 647282

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.053		0.500	0.544		mg/L		98	75 - 125	1	20

Lab Sample ID: MB 410-650590/1-A
Matrix: Water
Analysis Batch: 650879

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 650590

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		05/29/25 22:30	05/30/25 07:06	1

Lab Sample ID: LCS 410-650590/2-A
Matrix: Water
Analysis Batch: 650879

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 650590

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.500	0.513		mg/L		103	83 - 119

Lab Sample ID: LCSD 410-650590/3-A
Matrix: Water
Analysis Batch: 650879

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 650590

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.500	0.518		mg/L		104	83 - 119	1	20

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-656927/1-A
Matrix: Water
Analysis Batch: 657192

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 656927

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/21/25 14:00	05/22/25 22:19	1
Arsenic	ND		0.0050	0.00075	mg/L		05/21/25 14:00	05/22/25 22:19	1
Barium	ND		0.0050	0.00077	mg/L		05/21/25 14:00	05/22/25 22:19	1
Beryllium	ND		0.0010	0.00027	mg/L		05/21/25 14:00	05/22/25 22:19	1
Cadmium	ND		0.0010	0.000077	mg/L		05/21/25 14:00	05/22/25 22:19	1
Calcium	ND		1.0	0.25	mg/L		05/21/25 14:00	05/22/25 22:19	1
Chromium	ND		0.0050	0.0012	mg/L		05/21/25 14:00	05/22/25 22:19	1
Cobalt	ND		0.0010	0.000086	mg/L		05/21/25 14:00	05/22/25 22:19	1
Lead	ND		0.0010	0.00045	mg/L		05/21/25 14:00	05/22/25 22:19	1
Lithium	ND		0.0080	0.0034	mg/L		05/21/25 14:00	05/22/25 22:19	1
Molybdenum	ND		0.0050	0.0011	mg/L		05/21/25 14:00	05/22/25 22:19	1
Selenium	ND		0.0050	0.00089	mg/L		05/21/25 14:00	05/22/25 22:19	1
Thallium	ND		0.0010	0.00051	mg/L		05/21/25 14:00	05/22/25 22:19	1

Lab Sample ID: LCS 240-656927/2-A
Matrix: Water
Analysis Batch: 657192

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 656927

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.100	0.0968		mg/L		97	80 - 120

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-656927/2-A
Matrix: Water
Analysis Batch: 657192

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 656927

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	0.997		mg/L		100	80 - 120
Barium	1.00	0.970		mg/L		97	80 - 120
Beryllium	0.500	0.486		mg/L		97	80 - 120
Cadmium	0.500	0.473		mg/L		95	80 - 120
Calcium	25.0	25.0		mg/L		100	80 - 120
Chromium	0.500	0.492		mg/L		98	80 - 120
Cobalt	0.500	0.473		mg/L		95	80 - 120
Lead	0.500	0.535		mg/L		107	80 - 120
Lithium	0.500	0.547		mg/L		109	80 - 120
Molybdenum	0.500	0.491		mg/L		98	80 - 120
Selenium	1.00	0.964		mg/L		96	80 - 120
Thallium	1.00	1.14		mg/L		114	80 - 120

Lab Sample ID: 180-190515-9 MS
Matrix: Water
Analysis Batch: 657192

Client Sample ID: WAP-6D
Prep Type: Total Recoverable
Prep Batch: 656927

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		0.100	0.0999		mg/L		100	80 - 120
Arsenic	0.0061		1.00	1.02		mg/L		102	80 - 120
Barium	0.20		1.00	1.18		mg/L		99	80 - 120
Beryllium	ND		0.500	0.484		mg/L		97	80 - 120
Cadmium	ND		0.500	0.478		mg/L		96	80 - 120
Calcium	42		25.0	66.2		mg/L		98	80 - 120
Chromium	ND		0.500	0.494		mg/L		99	80 - 120
Cobalt	0.00011	J	0.500	0.480		mg/L		96	80 - 120
Lead	ND		0.500	0.537		mg/L		107	80 - 120
Lithium	ND		0.500	0.549		mg/L		110	80 - 120
Molybdenum	0.0028	J	0.500	0.506		mg/L		101	80 - 120
Selenium	ND		1.00	0.978		mg/L		98	80 - 120
Thallium	ND		1.00	1.14		mg/L		114	80 - 120

Lab Sample ID: 180-190515-9 MSD
Matrix: Water
Analysis Batch: 657192

Client Sample ID: WAP-6D
Prep Type: Total Recoverable
Prep Batch: 656927

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		0.100	0.0990		mg/L		99	80 - 120	1	20
Arsenic	0.0061		1.00	0.999		mg/L		99	80 - 120	2	20
Barium	0.20		1.00	1.15		mg/L		96	80 - 120	3	20
Beryllium	ND		0.500	0.476		mg/L		95	80 - 120	2	20
Cadmium	ND		0.500	0.469		mg/L		94	80 - 120	2	20
Calcium	42		25.0	63.9		mg/L		89	80 - 120	4	20
Chromium	ND		0.500	0.484		mg/L		97	80 - 120	2	20
Cobalt	0.00011	J	0.500	0.468		mg/L		94	80 - 120	3	20
Lead	ND		0.500	0.525		mg/L		105	80 - 120	2	20
Lithium	ND		0.500	0.538		mg/L		108	80 - 120	2	20
Molybdenum	0.0028	J	0.500	0.496		mg/L		99	80 - 120	2	20
Selenium	ND		1.00	0.955		mg/L		96	80 - 120	2	20

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-190515-9 MSD
Matrix: Water
Analysis Batch: 657192

Client Sample ID: WAP-6D
Prep Type: Total Recoverable
Prep Batch: 656927

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Thallium	ND		1.00	1.12		mg/L		112	80 - 120	2	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 410-647166/1-A
Matrix: Water
Analysis Batch: 649992

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 647166

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 15:10	1

Lab Sample ID: LCS 410-647166/2-A
Matrix: Water
Analysis Batch: 649992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 647166

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00100	0.00102		mg/L		102	80 - 118

Lab Sample ID: MB 410-647168/1-A
Matrix: Water
Analysis Batch: 649992

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 647168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/28/25 09:20	05/28/25 19:15	1

Lab Sample ID: LCS 410-647168/2-A
Matrix: Water
Analysis Batch: 649992

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 647168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00100	0.00112		mg/L		112	80 - 118

Lab Sample ID: 180-190515-9 MS
Matrix: Water
Analysis Batch: 649992

Client Sample ID: WAP-6D
Prep Type: Total/NA
Prep Batch: 647168

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		0.00100	0.00114		mg/L		114	80 - 120

Lab Sample ID: 180-190515-9 MSD
Matrix: Water
Analysis Batch: 649992

Client Sample ID: WAP-6D
Prep Type: Total/NA
Prep Batch: 647168

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.00111		mg/L		111	80 - 120	2	20

Method: EPA 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: MB 410-651139/1-A
Matrix: Water
Analysis Batch: 651956

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 651139

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		05/31/25 01:40	06/02/25 20:27	1

Lab Sample ID: LCS 410-651139/2-A
Matrix: Water
Analysis Batch: 651956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 651139

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00100	0.00112		mg/L		112	80 - 118

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-496279/1
Matrix: Water
Analysis Batch: 496279

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-496326/1
Matrix: Water
Analysis Batch: 496326

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		99	99 - 101

Lab Sample ID: 180-190515-13 DU
Matrix: Water
Analysis Batch: 496326

Client Sample ID: DUP-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.4	HF	7.4		SU		0.3	2

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

Lab Sample ID: MB 180-496195/1
Matrix: Water
Analysis Batch: 496195

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		10	10	mg/L			05/19/25 16:40	1

Lab Sample ID: LCS 180-496195/2
Matrix: Water
Analysis Batch: 496195

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	420	360		mg/L		86	85 - 115

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-719394/1-A
Matrix: Water
Analysis Batch: 723605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 719394

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01851	U	0.195	0.195	1.00	0.397	pCi/L	05/27/25 08:21	06/20/25 16:05	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.8		30 - 110	05/27/25 08:21	06/20/25 16:05	1

Lab Sample ID: LCS 160-719394/2-A
Matrix: Water
Analysis Batch: 723605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 719394

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	8.033		1.12	1.00	0.362	pCi/L	84	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	93.3		30 - 110

Lab Sample ID: 180-190515-9 DU
Matrix: Water
Analysis Batch: 723605

Client Sample ID: WAP-6D
Prep Type: Total/NA
Prep Batch: 719394

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-226	0.300	U		0.3435	U	0.253	1.00	0.354	pCi/L			0.08	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	82.6		30 - 110

Lab Sample ID: MB 160-719399/1-A
Matrix: Water
Analysis Batch: 723115

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 719399

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1684	U	0.175	0.175	1.00	0.274	pCi/L	05/27/25 08:31	06/18/25 21:30	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		30 - 110	05/27/25 08:31	06/18/25 21:30	1

Lab Sample ID: LCS 160-719399/2-A
Matrix: Water
Analysis Batch: 723115

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 719399

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-226			9.58	8.478		1.13	1.00	0.259	pCi/L	89	75 - 125		

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-719399/2-A
Matrix: Water
Analysis Batch: 723115

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 719399

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.0		30 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-719396/1-A
Matrix: Water
Analysis Batch: 723611

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 719396

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2750	U	0.354	0.355	1.00	0.589	pCi/L	05/27/25 08:27	06/20/25 11:44	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	84.8		30 - 110	05/27/25 08:27	06/20/25 11:44	1
Y Carrier	80.7		30 - 110	05/27/25 08:27	06/20/25 11:44	1

Lab Sample ID: LCS 160-719396/2-A
Matrix: Water
Analysis Batch: 723611

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 719396

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.33	10.60		1.40	1.00	0.492	pCi/L	114	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	93.3		30 - 110
Y Carrier	81.5		30 - 110

Lab Sample ID: 180-190515-9 DU
Matrix: Water
Analysis Batch: 723611

Client Sample ID: WAP-6D
Prep Type: Total/NA
Prep Batch: 719396

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.0698	U		0.2688	U	0.339	1.00	0.561	pCi/L			0.32	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	82.6		30 - 110
Y Carrier	81.9		30 - 110

Lab Sample ID: MB 160-719400/1-A
Matrix: Water
Analysis Batch: 723120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 719400

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.6934		0.392	0.397	1.00	0.564	pCi/L	05/27/25 08:37	06/18/25 11:39	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-719400/1-A
Matrix: Water
Analysis Batch: 723120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 719400

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		30 - 110	05/27/25 08:37	06/18/25 11:39	1
Y Carrier	81.9		30 - 110	05/27/25 08:37	06/18/25 11:39	1

Lab Sample ID: LCS 160-719400/2-A
Matrix: Water
Analysis Batch: 723120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 719400

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.34	8.937		1.29	1.00	0.593	pCi/L	96	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	90.0		30 - 110
Y Carrier	77.8		30 - 110

HPLC/IC

Analysis Batch: 496509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-7	WAP-6S	Total/NA	Water	EPA 9056A	
180-190515-8	WAP-6I	Total/NA	Water	EPA 9056A	
180-190515-9	WAP-6D	Total/NA	Water	EPA 9056A	
180-190515-10	WAP-9S	Total/NA	Water	EPA 9056A	
180-190515-10	WAP-9S	Total/NA	Water	EPA 9056A	
180-190515-11	WAP-9I	Total/NA	Water	EPA 9056A	
180-190515-12	WAP-9D	Total/NA	Water	EPA 9056A	
180-190515-15	FIELD BLANK 1	Total/NA	Water	EPA 9056A	
MB 180-496509/50	Method Blank	Total/NA	Water	EPA 9056A	
MB 180-496509/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-496509/51	Lab Control Sample	Total/NA	Water	EPA 9056A	
LCS 180-496509/7	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-190515-9 MS	WAP-6D	Total/NA	Water	EPA 9056A	
180-190515-9 MSD	WAP-6D	Total/NA	Water	EPA 9056A	
180-190515-15 MS	FIELD BLANK 1	Total/NA	Water	EPA 9056A	
180-190515-15 MSD	FIELD BLANK 1	Total/NA	Water	EPA 9056A	

Analysis Batch: 496568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total/NA	Water	EPA 9056A	
180-190515-2	WAP-4I	Total/NA	Water	EPA 9056A	
180-190515-3	WAP-4D	Total/NA	Water	EPA 9056A	
180-190515-4	WAP-5S	Total/NA	Water	EPA 9056A	
180-190515-4	WAP-5S	Total/NA	Water	EPA 9056A	
180-190515-5	WAP-5I	Total/NA	Water	EPA 9056A	
180-190515-6	WAP-5D	Total/NA	Water	EPA 9056A	
180-190515-13	DUP-1	Total/NA	Water	EPA 9056A	
180-190515-14	DUP-2	Total/NA	Water	EPA 9056A	
MB 180-496568/47	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-496568/48	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-190515-3 MS	WAP-4D	Total/NA	Water	EPA 9056A	
180-190515-3 MSD	WAP-4D	Total/NA	Water	EPA 9056A	

Analysis Batch: 496625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total/NA	Water	EPA 9056A	
180-190515-7	WAP-6S	Total/NA	Water	EPA 9056A	
MB 180-496625/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-496625/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 647072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-7	WAP-6S	Total Recoverable	Water	3005A	
180-190515-12	WAP-9D	Total Recoverable	Water	3005A	
180-190515-13	DUP-1	Total Recoverable	Water	3005A	
180-190515-14	DUP-2	Total Recoverable	Water	3005A	
MB 410-647072/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-647072/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals

Prep Batch: 647166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total/NA	Water	7470A	
180-190515-4	WAP-5S	Total/NA	Water	7470A	
180-190515-5	WAP-5I	Total/NA	Water	7470A	
180-190515-6	WAP-5D	Total/NA	Water	7470A	
180-190515-8	WAP-6I	Total/NA	Water	7470A	
180-190515-12	WAP-9D	Total/NA	Water	7470A	
180-190515-13	DUP-1	Total/NA	Water	7470A	
180-190515-14	DUP-2	Total/NA	Water	7470A	
MB 410-647166/1-A	Method Blank	Total/NA	Water	7470A	
LCS 410-647166/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 647168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-3	WAP-4D	Total/NA	Water	7470A	
180-190515-7	WAP-6S	Total/NA	Water	7470A	
180-190515-9	WAP-6D	Total/NA	Water	7470A	
180-190515-10	WAP-9S	Total/NA	Water	7470A	
180-190515-15	FIELD BLANK 1	Total/NA	Water	7470A	
MB 410-647168/1-A	Method Blank	Total/NA	Water	7470A	
LCS 410-647168/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-190515-9 MS	WAP-6D	Total/NA	Water	7470A	
180-190515-9 MSD	WAP-6D	Total/NA	Water	7470A	

Prep Batch: 647282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total Recoverable	Water	3005A	
180-190515-3	WAP-4D	Total Recoverable	Water	3005A	
180-190515-4	WAP-5S	Total Recoverable	Water	3005A	
180-190515-5	WAP-5I	Total Recoverable	Water	3005A	
180-190515-6	WAP-5D	Total Recoverable	Water	3005A	
180-190515-8	WAP-6I	Total Recoverable	Water	3005A	
180-190515-9	WAP-6D	Total Recoverable	Water	3005A	
180-190515-10	WAP-9S	Total Recoverable	Water	3005A	
180-190515-15	FIELD BLANK 1	Total Recoverable	Water	3005A	
MB 410-647282/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-647282/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-190515-9 MS	WAP-6D	Total Recoverable	Water	3005A	
180-190515-9 MSD	WAP-6D	Total Recoverable	Water	3005A	

Analysis Batch: 649737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-3	WAP-4D	Total Recoverable	Water	EPA 6010D	647282
180-190515-5	WAP-5I	Total Recoverable	Water	EPA 6010D	647282
180-190515-6	WAP-5D	Total Recoverable	Water	EPA 6010D	647282
180-190515-8	WAP-6I	Total Recoverable	Water	EPA 6010D	647282
180-190515-9	WAP-6D	Total Recoverable	Water	EPA 6010D	647282
180-190515-10	WAP-9S	Total Recoverable	Water	EPA 6010D	647282
180-190515-15	FIELD BLANK 1	Total Recoverable	Water	EPA 6010D	647282
MB 410-647282/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	647282
LCS 410-647282/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	647282
180-190515-9 MS	WAP-6D	Total Recoverable	Water	EPA 6010D	647282

Metals (Continued)

Analysis Batch: 649737 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-9 MSD	WAP-6D	Total Recoverable	Water	EPA 6010D	647282

Analysis Batch: 649992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total/NA	Water	EPA 7470A	647166
180-190515-3	WAP-4D	Total/NA	Water	EPA 7470A	647168
180-190515-4	WAP-5S	Total/NA	Water	EPA 7470A	647166
180-190515-5	WAP-5I	Total/NA	Water	EPA 7470A	647166
180-190515-6	WAP-5D	Total/NA	Water	EPA 7470A	647166
180-190515-7	WAP-6S	Total/NA	Water	EPA 7470A	647168
180-190515-8	WAP-6I	Total/NA	Water	EPA 7470A	647166
180-190515-9	WAP-6D	Total/NA	Water	EPA 7470A	647168
180-190515-10	WAP-9S	Total/NA	Water	EPA 7470A	647168
180-190515-12	WAP-9D	Total/NA	Water	EPA 7470A	647166
180-190515-13	DUP-1	Total/NA	Water	EPA 7470A	647166
180-190515-14	DUP-2	Total/NA	Water	EPA 7470A	647166
180-190515-15	FIELD BLANK 1	Total/NA	Water	EPA 7470A	647168
MB 410-647166/1-A	Method Blank	Total/NA	Water	EPA 7470A	647166
MB 410-647168/1-A	Method Blank	Total/NA	Water	EPA 7470A	647168
LCS 410-647166/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	647166
LCS 410-647168/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	647168
180-190515-9 MS	WAP-6D	Total/NA	Water	EPA 7470A	647168
180-190515-9 MSD	WAP-6D	Total/NA	Water	EPA 7470A	647168

Analysis Batch: 650016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-7	WAP-6S	Total Recoverable	Water	EPA 6010D	647072
180-190515-12	WAP-9D	Total Recoverable	Water	EPA 6010D	647072
180-190515-13	DUP-1	Total Recoverable	Water	EPA 6010D	647072
180-190515-14	DUP-2	Total Recoverable	Water	EPA 6010D	647072
MB 410-647072/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	647072
LCS 410-647072/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	647072

Analysis Batch: 650329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total Recoverable	Water	EPA 6010D	647282
180-190515-4	WAP-5S	Total Recoverable	Water	EPA 6010D	647282

Prep Batch: 650590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-2	WAP-4I	Total Recoverable	Water	3005A	
180-190515-11	WAP-9I	Total Recoverable	Water	3005A	
MB 410-650590/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-650590/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 410-650590/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

Analysis Batch: 650879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-2	WAP-4I	Total Recoverable	Water	EPA 6010D	650590
180-190515-11	WAP-9I	Total Recoverable	Water	EPA 6010D	650590
MB 410-650590/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	650590

Metals (Continued)

Analysis Batch: 650879 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 410-650590/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	650590
LCSD 410-650590/3-A	Lab Control Sample Dup	Total Recoverable	Water	EPA 6010D	650590

Prep Batch: 651139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-2	WAP-4I	Total/NA	Water	7470A	
180-190515-11	WAP-9I	Total/NA	Water	7470A	
MB 410-651139/1-A	Method Blank	Total/NA	Water	7470A	
LCS 410-651139/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 651956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-2	WAP-4I	Total/NA	Water	EPA 7470A	651139
180-190515-11	WAP-9I	Total/NA	Water	EPA 7470A	651139
MB 410-651139/1-A	Method Blank	Total/NA	Water	EPA 7470A	651139
LCS 410-651139/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	651139

Prep Batch: 656927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total Recoverable	Water	3005A	
180-190515-2	WAP-4I	Total Recoverable	Water	3005A	
180-190515-3	WAP-4D	Total Recoverable	Water	3005A	
180-190515-4	WAP-5S	Total Recoverable	Water	3005A	
180-190515-5	WAP-5I	Total Recoverable	Water	3005A	
180-190515-6	WAP-5D	Total Recoverable	Water	3005A	
180-190515-7	WAP-6S	Total Recoverable	Water	3005A	
180-190515-8	WAP-6I	Total Recoverable	Water	3005A	
180-190515-9	WAP-6D	Total Recoverable	Water	3005A	
180-190515-10	WAP-9S	Total Recoverable	Water	3005A	
180-190515-11	WAP-9I	Total Recoverable	Water	3005A	
180-190515-12	WAP-9D	Total Recoverable	Water	3005A	
180-190515-13	DUP-1	Total Recoverable	Water	3005A	
180-190515-14	DUP-2	Total Recoverable	Water	3005A	
180-190515-15	FIELD BLANK 1	Total Recoverable	Water	3005A	
MB 240-656927/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-656927/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-190515-9 MS	WAP-6D	Total Recoverable	Water	3005A	
180-190515-9 MSD	WAP-6D	Total Recoverable	Water	3005A	

Analysis Batch: 657192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total Recoverable	Water	EPA 6020B	656927
180-190515-2	WAP-4I	Total Recoverable	Water	EPA 6020B	656927
180-190515-3	WAP-4D	Total Recoverable	Water	EPA 6020B	656927
180-190515-4	WAP-5S	Total Recoverable	Water	EPA 6020B	656927
180-190515-5	WAP-5I	Total Recoverable	Water	EPA 6020B	656927
180-190515-6	WAP-5D	Total Recoverable	Water	EPA 6020B	656927
180-190515-7	WAP-6S	Total Recoverable	Water	EPA 6020B	656927
180-190515-8	WAP-6I	Total Recoverable	Water	EPA 6020B	656927
180-190515-9	WAP-6D	Total Recoverable	Water	EPA 6020B	656927
180-190515-10	WAP-9S	Total Recoverable	Water	EPA 6020B	656927

Metals (Continued)

Analysis Batch: 657192 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-11	WAP-9I	Total Recoverable	Water	EPA 6020B	656927
180-190515-12	WAP-9D	Total Recoverable	Water	EPA 6020B	656927
180-190515-13	DUP-1	Total Recoverable	Water	EPA 6020B	656927
180-190515-14	DUP-2	Total Recoverable	Water	EPA 6020B	656927
180-190515-15	FIELD BLANK 1	Total Recoverable	Water	EPA 6020B	656927
MB 240-656927/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	656927
LCS 240-656927/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	656927
180-190515-9 MS	WAP-6D	Total Recoverable	Water	EPA 6020B	656927
180-190515-9 MSD	WAP-6D	Total Recoverable	Water	EPA 6020B	656927

General Chemistry

Analysis Batch: 496195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total/NA	Water	SM 2540C	
180-190515-2	WAP-4I	Total/NA	Water	SM 2540C	
180-190515-3	WAP-4D	Total/NA	Water	SM 2540C	
180-190515-4	WAP-5S	Total/NA	Water	SM 2540C	
180-190515-5	WAP-5I	Total/NA	Water	SM 2540C	
180-190515-6	WAP-5D	Total/NA	Water	SM 2540C	
180-190515-7	WAP-6S	Total/NA	Water	SM 2540C	
180-190515-8	WAP-6I	Total/NA	Water	SM 2540C	
180-190515-9	WAP-6D	Total/NA	Water	SM 2540C	
180-190515-10	WAP-9S	Total/NA	Water	SM 2540C	
180-190515-11	WAP-9I	Total/NA	Water	SM 2540C	
180-190515-12	WAP-9D	Total/NA	Water	SM 2540C	
180-190515-13	DUP-1	Total/NA	Water	SM 2540C	
180-190515-14	DUP-2	Total/NA	Water	SM 2540C	
180-190515-15	FIELD BLANK 1	Total/NA	Water	SM 2540C	
MB 180-496195/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-496195/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 496279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total/NA	Water	EPA 9040C	
180-190515-2	WAP-4I	Total/NA	Water	EPA 9040C	
180-190515-4	WAP-5S	Total/NA	Water	EPA 9040C	
LCS 180-496279/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 496326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-3	WAP-4D	Total/NA	Water	EPA 9040C	
180-190515-5	WAP-5I	Total/NA	Water	EPA 9040C	
180-190515-6	WAP-5D	Total/NA	Water	EPA 9040C	
180-190515-7	WAP-6S	Total/NA	Water	EPA 9040C	
180-190515-8	WAP-6I	Total/NA	Water	EPA 9040C	
180-190515-9	WAP-6D	Total/NA	Water	EPA 9040C	
180-190515-10	WAP-9S	Total/NA	Water	EPA 9040C	
180-190515-11	WAP-9I	Total/NA	Water	EPA 9040C	
180-190515-12	WAP-9D	Total/NA	Water	EPA 9040C	
180-190515-13	DUP-1	Total/NA	Water	EPA 9040C	

General Chemistry (Continued)

Analysis Batch: 496326 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-14	DUP-2	Total/NA	Water	EPA 9040C	
180-190515-15	FIELD BLANK 1	Total/NA	Water	EPA 9040C	
LCS 180-496326/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-190515-13 DU	DUP-1	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 719394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-5	WAP-5I	Total/NA	Water	PrecSep-21	
180-190515-6	WAP-5D	Total/NA	Water	PrecSep-21	
180-190515-7	WAP-6S	Total/NA	Water	PrecSep-21	
180-190515-8	WAP-6I	Total/NA	Water	PrecSep-21	
180-190515-9	WAP-6D	Total/NA	Water	PrecSep-21	
180-190515-10	WAP-9S	Total/NA	Water	PrecSep-21	
180-190515-11	WAP-9I	Total/NA	Water	PrecSep-21	
180-190515-12	WAP-9D	Total/NA	Water	PrecSep-21	
180-190515-13	DUP-1	Total/NA	Water	PrecSep-21	
180-190515-14	DUP-2	Total/NA	Water	PrecSep-21	
180-190515-15	FIELD BLANK 1	Total/NA	Water	PrecSep-21	
MB 160-719394/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-719394/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-190515-9 DU	WAP-6D	Total/NA	Water	PrecSep-21	

Prep Batch: 719396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-5	WAP-5I	Total/NA	Water	PrecSep_0	
180-190515-6	WAP-5D	Total/NA	Water	PrecSep_0	
180-190515-7	WAP-6S	Total/NA	Water	PrecSep_0	
180-190515-8	WAP-6I	Total/NA	Water	PrecSep_0	
180-190515-9	WAP-6D	Total/NA	Water	PrecSep_0	
180-190515-10	WAP-9S	Total/NA	Water	PrecSep_0	
180-190515-11	WAP-9I	Total/NA	Water	PrecSep_0	
180-190515-12	WAP-9D	Total/NA	Water	PrecSep_0	
180-190515-13	DUP-1	Total/NA	Water	PrecSep_0	
180-190515-14	DUP-2	Total/NA	Water	PrecSep_0	
180-190515-15	FIELD BLANK 1	Total/NA	Water	PrecSep_0	
MB 160-719396/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-719396/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-190515-9 DU	WAP-6D	Total/NA	Water	PrecSep_0	

Prep Batch: 719399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total/NA	Water	PrecSep-21	
180-190515-2	WAP-4I	Total/NA	Water	PrecSep-21	
180-190515-3	WAP-4D	Total/NA	Water	PrecSep-21	
180-190515-4	WAP-5S	Total/NA	Water	PrecSep-21	
MB 160-719399/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-719399/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Rad

Prep Batch: 719400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190515-1	WAP-4S	Total/NA	Water	PrecSep_0	
180-190515-2	WAP-4I	Total/NA	Water	PrecSep_0	
180-190515-3	WAP-4D	Total/NA	Water	PrecSep_0	
180-190515-4	WAP-5S	Total/NA	Water	PrecSep_0	
MB 160-719400/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-719400/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

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Client Information	Sampler: Jon Ihrl	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-112838-14503.1
Client Contact: Britton Hundley	Phone: 317-473-1325	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: IN	Page: Page 1 of 3
Company: Haley & Aldrich, Inc	PWSID:	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested: STD			Preservation Codes: N - None D - HNO3
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			Other:
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A	6010D - Boron by 6010D	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D	D		
WAP-1				Water										
WAP-2RR				Water										
WAP-3S				Water										
WAP-3D				Water										
WAP-4S	5.13.25	1175	G	Water										
WAP-4I		1220		Water										
WAP-4D		1330		Water										
WAP-5S		740		Water										
WAP-5I		845		Water										
WAP-5D		1020		Water										
WAP-6S	5.14.25	1045		Water										

180-190515 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested. I, II, III, IV, Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by	Date:	Time	Method of Shipment:

Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
[signature]	5.14.25 / 1600	AT/MS	[signature]	5/15/25 600	[illegible]
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
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

Ver: 10/10/2024

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Jon Hall	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-112838-14503.2
Client Contact: Britton Hundley	Phone: 317-473-1325	E-Mail: Andy Johnson@et.eurofinsus.com	State of Origin: IN	Page: Page 2 of 3
Company: Haley & Aldrich, Inc	PWSID:	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested: STD			Preservation Codes: N - None D - HNO3
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A	6010D - Boron by 6010D							Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D	D								
WAP-6I	5.14.25	950		Water																
WAP-6D	↓	845		Water																mw/mso -1
WAP-7S				Water																
WAP-7D				Water																
WAP-8S				Water																
WAP-8I				Water																
WAP-8D				Water																
WAP-9S	5.14.25	1440		Water																
WAP-9I		1315		Water																
WAP-9D	↓	1200		Water																
CCR-AP-7				Water																

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested. I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
J Hall	5.14.25/1600	AT/AS		5/15/25 903	EPI-PT NB
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
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

Ver: 10/10/2024

Page 12 of 13

9/25/2025

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Jon Hall	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-112838-14503 3
Client Contact: Britton Hundley	Phone: 317.473.1325	E-Mail: Andy Johnson@et.eurofinsus com	State of Origin: IN	Page: Page 3 of 3
Company: Haley & Aldrich, Inc	PWSID:	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested: STD			Preservation Codes: N - None D - HNO3
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site:	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C; 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226; 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A	6010D - Boron by 6010D	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D	D		
DUP 1	5.13.25	-	G	Water										
DUP 2	5.13.25	-	G	Water										
FIELD BLANK 1	5.14.25	800	G	Water										
MS 1	5.15.25	845	G	Water										
MSD 1	5.15.25	845	G	Water										
MS 2				Water										
MSD 2				Water										
EXTRA				Water										
EXTRA				Water										

6/23/2025

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested. I, II, III, IV, Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
J Hall	5.14.25 / 1600	ATLAS		5/15/25 900	EPNE
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
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

Ver: 10/10/2024


AGCA (317) 579-4082
SH
VECTREN CORPORATION
INGTON ROAD
IN 47630
TATES US
ACTWGT: 40.00 L
CAD: 0522321/CAFE3905
PLE RECEIVING DEPARTMENT
OFINS ENVIRO. TESTING PITT N.E.
ALPHA DRIVE
TTSBURGH PA 15238
63-7630
: RETURN
FedEx
Express
NEWBURGH, IN 47630
UNITED STATES US
TO SAMPLE RECEIVING DEPARTMENT
EUROFINS ENVIRO. TESTING PITT N.E.
301 ALPHA DRIVE
PITTSBURGH PA 15238
(412) 963-7630
REF: RETURN
RMA:
FedEx
Express
RETURNS MON-
PRIORITY OVERNIGHT
15238
PIT
PA-US
Uncorrected temp
Thermometer ID
Initials
CF -0.1
°C
4150 THU 05/15 07:49 230052
EUROFINS ENVIRO. TESTING PITT N.E.
301 ALPHA DR
PITTSBURGH PA
15238-2907-01
G
PRIORITY OVERNIGHT
198-4597FL
ETP: 12 SP:XX:100:
100228434211000152380043596082410B
NX AGCA
Uncorrected temp
Thermometer ID
CF -0.1
Initials
PT-WI-SR-001 effective 7/26/13
°C
PA-US
15238
PIT
180-190515 Waybill

ORIGIN ID:AGCA (317) 579-4082
LINDSEY GISH
FB CULLEY VECTREN CORPORATION
3711 DARLINGTON ROAD
NEWBURGH, IN 47630
UNITED STATES US

SHIP DATE: 24AP
ACTWGT: 40.00 LB
CAD: 0522321/CAF

TO SAMPLE RECEIVING DEPARTMENT
EUROFINS ENVIRO. TESTING PITT N.E.
301 ALPHA DRIVE

PITTSBURGH PA 15238
(412) 963-7630
REF: RETURN

RMA:

Fe

ORIGIN ID:AGCA (317) 579-4082
LINDSEY GISH
FB CULLEY VECTREN CORPORATION
3711 DARLINGTON ROAD
NEWBURGH, IN 47630
UNITED STATES US

TO SAMPLE RECEIVING DEPARTMENT
EUROFINS ENVIRO. TESTING PITT
301 ALPHA DRIVE

PITTSBURGH PA 15238
(412) 963-7630
REF: RETURN

RMA:

FedEx
TRK# 4359 6082 4119
0221

THU - 15 MAY 10:30A
PRIOR
OVERNIGHT

15238
PA-US

NX AGCA

Uncorrected temp 29 °C
Thermometer ID 26
CF +0.9 Initials JT

PT-WI-SR-001 effective 7/26/13

#6190970 05/14 5BGJ4/EA36/59F2

EXP 11/25

15238
PA-US

NX AGCA

Uncorrected temp 29 °C
Thermometer ID 26
CF +0.9 Initials JT

PT-WI-SR-001 effective 7/26/13

#6190970 05/14 5BGJ4/EA36/59F2

EXP 11/25

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Johnson, Andy	Carrier Tracking No(s): N/A	COC No: 180-538896.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 180-190515-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 5/25/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: CCR Groundwater Monitoring FB Culley West	Project #: 18016014			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WAP-4S (180-190515-1)	5/13/25	11:25 Eastern	G	Water			X	X	X	2	
WAP-4I (180-190515-2)	5/13/25	12:20 Eastern	G	Water			X	X	X	2	
WAP-4D (180-190515-3)	5/13/25	13:30 Eastern	G	Water			X	X	X	2	
WAP-5S (180-190515-4)	5/13/25	07:40 Eastern	G	Water			X	X	X	2	
WAP-5I (180-190515-5)	5/13/25	08:45 Eastern	G	Water			X	X	X	2	
WAP-5D (180-190515-6)	5/13/25	10:20 Eastern	G	Water			X	X	X	2	
WAP-6S (180-190515-7)	5/14/25	10:45 Eastern	G	Water			X	X	X	2	
WAP-6I (180-190515-8)	5/14/25	09:50 Eastern	G	Water			X	X	X	2	
WAP-6D (180-190515-9)	5/14/25	08:45 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	5/20/25 1700	EFPTSB	M. Pinette	MAY 22 2025 1445	
	Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Johnson, Andy	Carrier Tracking No(s): N/A	COC No: 180-538896.2
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 180-190515-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 5/25/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: CCR Groundwater Monitoring FB Culley West	Project #: 18016014			Other: N/A
Site: N/A	SSOW#: N/A			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WAP-6D (180-190515-9DU)	5/14/25	08:45 Eastern	G	Water			X	X	X	4	
WAP-9S (180-190515-10)	5/14/25	14:40 Eastern	G	Water			X	X	X	2	
WAP-9I (180-190515-11)	5/14/25	13:15 Eastern	G	Water			X	X	X	2	
WAP-9D (180-190515-12)	5/14/25	12:00 Eastern	G	Water			X	X	X	2	
DUP-1 (180-190515-13)	5/13/25	Eastern	G	Water			X	X	X	2	
DUP-2 (180-190515-14)	5/13/25	Eastern	G	Water			X	X	X	2	
FIELD BLANK 1 (180-190515-15)	5/14/25	08:00 Eastern	G	Water			X	X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5/20/25 1700	GTTMS	M. Pinette	MAY 22 2025 1445	
2	Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company
3	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:

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-190515-1
SDG Number: FB Culley West

Login Number: 190515
List Number: 1
Creator: Ryan, Shannon G

List Source: Eurofins Pittsburgh

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.	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?	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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-190515-1
SDG Number: FB Culley West

Login Number: 190515
List Number: 4
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 05/22/25 03:40 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.	N/A	
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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11 12 13

ANALYTICAL REPORT

PREPARED FOR

Attn: Todd Plating
Haley & Aldrich, Inc.
400 Augusta Street
Suite 100
Greenville, South Carolina 29601

Generated 6/23/2025 7:44:12 PM

JOB DESCRIPTION

CCR Groundwater Monitoring FB Culley West
FB Culley West

JOB NUMBER

180-190649-1

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

myEOL

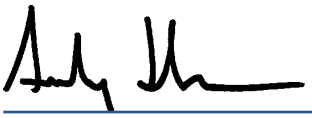
Job Notes

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



Generated
6/23/2025 7:44:12 PM

Authorized for release by
Andy Johnson, Senior Project Manager
Andy.Johnson@et.eurofinsus.com
(615)818-9567

Table of Contents

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Job ID: 180-190649-1 Eurofins Pittsburgh

Job Narrative
180-190649-1

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 5/17/2025 11:20 AM and 5/19/2025 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.4°C, 1.6°C, 1.8°C, 2.4°C, 3.6°C and 14.1°C.

Receipt Exceptions
The following samples were listed on the Chain of Custody (COC); however, no samples were received: WAP-8S (180-190649-2) and WAP-8I (180-190649-3).

The missing cooler for the following two samples, was received at the laboratory outside the required temperature criteria of 14.1°C. WAP-8S (180-190649-2) and WAP-8I (180-190649-3). This does not meet regulatory requirements. The client was contacted regarding this issue and the laboratory was instructed to cancel the analyses.

Gas Flow Proportional Counter
Method 9320_Ra228: Radium-228 batch 719393 The detection goal was not met for the following sample due to the reduced sample volume attributed to the presence of matrix interferences: WAP-1 (180-190649-1). Analytical results are reported with the detection limit achieved.

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

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

Job ID: 180-190649-2 Eurofins Pittsburgh

Job Narrative
180-190649-2

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 5/17/2025 11:20 AM and 5/19/2025 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.4°C, 1.6°C, 1.8°C, 2.4°C, 3.6°C and 14.1°C.

Receipt Exceptions
The following samples were listed on the Chain of Custody (COC); however, no samples were received: WAP-8S (180-190649-2) and WAP-8I (180-190649-3).

The missing cooler for the following two samples, was received at the laboratory outside the required temperature criteria of 14.1°C. WAP-8S (180-190649-2) and WAP-8I (180-190649-3). This does not meet regulatory requirements. The client was contacted regarding this issue and the laboratory was instructed to cancel the analyses.

HPLC/IC
Method 9056A_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 180-496689 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: WAP-1 (180-190649-1), CCR-AP-7 (180-190649-5), CCR-AP-7 (180-190649-5[MS]) and CCR-AP-7 (180-190649-5[MSD]). Elevated reporting limits (RLs) are provided.

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
Method 2540C_Calcd: The sample duplicate precision for the following sample associated with analytical batch 180-496475 was outside control limits: <&commaMerge

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

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190649-1
SDG: FB Culley West

Qualifiers

HPLC/IC

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

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190649-1
SDG: FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00690	06-28-25
California	State	2891	04-30-24 *
Connecticut	State	PH-0820	09-30-26
Florida	NELAP	E871008	06-30-25
Georgia	State	PA 02-00416	04-30-26
Illinois	NELAP	200005	07-31-25
Kansas	NELAP	E-10350	01-31-26
Kentucky (UST)	State	162013	04-30-26
Kentucky (WW)	State	KY98043	12-31-25
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-25
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-25
New Hampshire	NELAP	2030	04-04-26
New Jersey	NELAP	PA005	06-30-25
New York	NELAP	11182	03-31-26
North Carolina (WW/SW)	State	434	12-31-25
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-26
Pennsylvania	NELAP	02-00416	04-30-26
Rhode Island	State	LAO00375	12-30-25
South Carolina	State	89014	04-30-25 *
Texas	NELAP	T104704528	03-31-26
US Fish & Wildlife	US Federal Programs	A21930	04-30-26
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462024-14	05-31-25
Virginia	NELAP	460189	09-14-25
West Virginia DEP	State	142	01-31-26
Wisconsin	State	998027800	08-31-25

Laboratory: Eurofins Cleveland

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

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	05-26-25
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 180-190649-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Laboratory: Eurofins Cleveland (Continued)

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-26
Alaska	State	PA00009	06-30-25
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-26
Arkansas DEQ	State	88-00660	08-09-25
California	State	2792	01-31-26
Colorado	State	PA00009	06-30-25
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-26
Delaware (DW)	State	N/A	01-31-26
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-26
Illinois	NELAP	200027	01-31-26
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-25
Kentucky (DW)	State	KY90088	12-31-25
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-25
Louisiana (All)	NELAP	02055	06-30-25
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-26
Minnesota	NELAP	042-999-487	12-31-25
Mississippi	State	023	01-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-26
Nebraska	State	NE-OS-32-17	01-31-26
New Hampshire	NELAP	2730	01-10-26
New Jersey	NELAP	PA011	06-30-25
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-25
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-25
Oregon	NELAP	PA200001	09-11-25

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

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	36-00037	01-31-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-25
South Carolina	State	89002	01-31-26
Tennessee	State	02838	01-31-26
Texas	NELAP	T104704194-23-46	08-31-25
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-25
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26
West Virginia (DW)	State	9906 C	03-31-26
West Virginia DEP	State	055	07-31-25
Wyoming	State	8TMS-L	01-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-27
ANAB	Dept. of Defense ELAP	L2305	04-06-27
ANAB	Dept. of Energy	L2305.01	04-06-27
ANAB	ISO/IEC 17025	L2305	04-06-27
Arizona	State	AZ0813	12-08-25
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-25
Connecticut	State	PH-0241	03-31-27
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-25
Iowa	State	373	12-01-26
Kansas	NELAP	E-10236	10-31-25
Kentucky (DW)	State	KY90125	12-31-25
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-25
Louisiana (All)	NELAP	106151	06-30-25
Louisiana (DW)	State	LA011	12-31-25
Maryland	State	310	09-30-25
Massachusetts	State	M-MO054	06-30-25
MI - RadChem Recognition	State	9005	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	06-30-25
New York	NELAP	11616	03-31-26
North Carolina (DW)	State	29700	08-02-25
North Dakota	State	R-207	06-30-25
Oklahoma	NELAP	9997	08-31-25
Oregon	NELAP	4157	09-01-25

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 180-190649-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Laboratory: Eurofins St. Louis (Continued)

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

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00540	02-28-26
South Carolina	State	85002	06-30-25
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	525-23-138-94730	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-26
Washington	State	C592	08-30-25
West Virginia DEP	State	381	10-31-25

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190649-1
SDG: FB Culley West

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-190649-1	WAP-1	Water	05/16/25 12:25	05/17/25 11:20
180-190649-4	WAP-8D	Water	05/16/25 11:36	05/17/25 11:20
180-190649-5	CCR-AP-7	Water	05/15/25 09:26	05/17/25 11:20

Method Summary

Client: Haley & Aldrich, Inc.
Job ID: 180-190649-1
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190649-1
SDG: FB Culley West

Client Sample ID: WAP-1

Date Collected: 05/16/25 12:25
Date Received: 05/17/25 11:20

Lab Sample ID: 180-190649-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496689	05/29/25 01:03	ERP	EET PIT
	Instrument ID: INUVION									
Total/NA	Analysis	EPA 9056A		10	1 mL	1 mL	496689	05/29/25 01:19	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	651908	06/02/25 21:30	UAMX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			652188	06/03/25 07:52	MT26	ELLE
	Instrument ID: T73 - 18255									
Total Recoverable	Prep	3005A			50 mL	50 mL	657091	05/22/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657404	05/23/25 18:32	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	651938	06/03/25 02:20	UAMX	ELLE
Total/NA	Analysis	EPA 7470A		1			652526	06/03/25 15:57	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496436	05/22/25 12:19	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496475	05/22/25 16:47	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			501.16 mL	1.0 g	719392	05/27/25 08:14	OGC	EET SL
Total/NA	Analysis	9315		1			723120	06/18/25 21:12	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			501.16 mL	1.0 g	719393	05/27/25 08:19	OGC	EET SL
Total/NA	Analysis	9320		1			723120	06/18/25 13:45	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			722908	06/19/25 17:08	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-8D

Date Collected: 05/16/25 11:36
Date Received: 05/17/25 11:20

Lab Sample ID: 180-190649-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496689	05/29/25 01:35	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	651908	06/02/25 21:30	UAMX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			652188	06/03/25 07:39	MT26	ELLE
	Instrument ID: T73 - 18255									
Total Recoverable	Prep	3005A			50 mL	50 mL	657091	05/22/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657404	05/23/25 18:34	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	651938	06/03/25 02:20	UAMX	ELLE
Total/NA	Analysis	EPA 7470A		1			652526	06/03/25 15:49	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496436	05/22/25 12:24	BAB	EET PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190649-1
SDG: FB Culley West

Client Sample ID: WAP-8D

Date Collected: 05/16/25 11:36
Date Received: 05/17/25 11:20

Lab Sample ID: 180-190649-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496475	05/22/25 16:47	SNR	EET PIT
Total/NA	Prep	PrecSep-21			1002.91 mL	1.0 g	719392	05/27/25 08:14	OGC	EET SL
Total/NA	Analysis	9315		1			723120	06/18/25 21:12	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1002.91 mL	1.0 g	719393	05/27/25 08:19	OGC	EET SL
Total/NA	Analysis	9320		1			723120	06/18/25 13:45	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			722908	06/19/25 17:08	FLC	EET SL
	Instrument ID: NOEQUIP									

Client Sample ID: CCR-AP-7

Date Collected: 05/15/25 09:26
Date Received: 05/17/25 11:20

Lab Sample ID: 180-190649-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	496689	05/28/25 19:04	ERP	EET PIT
	Instrument ID: INUVION									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	496689	05/28/25 19:19	ERP	EET PIT
	Instrument ID: INUVION									
Total Recoverable	Prep	3005A			50 mL	50 mL	651908	06/02/25 21:30	UAMX	ELLE
Total Recoverable	Analysis	EPA 6010D		1			652188	06/03/25 07:12	MT26	ELLE
	Instrument ID: T73 - 18255									
Total Recoverable	Prep	3005A			50 mL	50 mL	657091	05/22/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			657404	05/23/25 18:05	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20 mL	651938	06/03/25 02:20	UAMX	ELLE
Total/NA	Analysis	EPA 7470A		1			652526	06/03/25 15:36	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			496436	05/22/25 13:06	BAB	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	496475	05/22/25 16:47	SNR	EET PIT
	Instrument ID: NOEQUIP									
Total/NA	Prep	PrecSep-21			1003.02 mL	1.0 g	719392	05/27/25 08:14	OGC	EET SL
Total/NA	Analysis	9315		1			723120	06/18/25 21:12	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Prep	PrecSep_0			1003.02 mL	1.0 g	719393	05/27/25 08:19	OGC	EET SL
Total/NA	Analysis	9320		1			723120	06/18/25 13:45	SWS	EET SL
	Instrument ID: GFPCBLUE									
Total/NA	Analysis	Ra226_Ra228		1			722908	06/19/25 17:08	FLC	EET SL
	Instrument ID: NOEQUIP									

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-190649-1
SDG: FB Culley West

Analyst References:

Lab: EET CLE
- Batch Type: Prep
  - BN = Benjamin Norman
- Batch Type: Analysis
  - S4FJ = Katherine Wise

Lab: EET PIT
- Batch Type: Analysis
  - BAB = Brooke Batyi
  - ERP = Evan Papak
  - SNR = Sabra Richart

Lab: EET SL
- Batch Type: Prep
  - OGC = Olivia Carr
- Batch Type: Analysis
  - FLC = Fernando Cruz
  - SWS = Seth Stubblefield

Lab: ELLE
- Batch Type: Prep
  - UAMX = Annamaria Kuhns
- Batch Type: Analysis
  - IJ3I = Elizabeth Brittingham
  - MT26 = Jason Knight

Client Sample ID: WAP-1

Date Collected: 05/16/25 12:25
Date Received: 05/17/25 11:20

Lab Sample ID: 180-190649-1

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	75		1.0	0.71	mg/L			05/29/25 01:03	1
Fluoride	0.37		0.10	0.026	mg/L			05/29/25 01:03	1
Sulfate	400		10	7.6	mg/L			05/29/25 01:19	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.58		0.050	0.012	mg/L		06/02/25 21:30	06/03/25 07:52	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0011	J	0.0020	0.00057	mg/L		05/22/25 14:00	05/23/25 18:32	1
Arsenic	0.0028	J	0.0050	0.00075	mg/L		05/22/25 14:00	05/23/25 18:32	1
Barium	0.38		0.0050	0.00077	mg/L		05/22/25 14:00	05/23/25 18:32	1
Beryllium	ND		0.0010	0.00027	mg/L		05/22/25 14:00	05/23/25 18:32	1
Cadmium	ND		0.0010	0.000077	mg/L		05/22/25 14:00	05/23/25 18:32	1
Calcium	230		1.0	0.25	mg/L		05/22/25 14:00	05/23/25 18:32	1
Chromium	0.0023	J	0.0050	0.0012	mg/L		05/22/25 14:00	05/23/25 18:32	1
Cobalt	0.0010		0.0010	0.000086	mg/L		05/22/25 14:00	05/23/25 18:32	1
Lead	0.0022		0.0010	0.00045	mg/L		05/22/25 14:00	05/23/25 18:32	1
Lithium	0.0072	J	0.0080	0.0034	mg/L		05/22/25 14:00	05/23/25 18:32	1
Molybdenum	ND		0.0050	0.0011	mg/L		05/22/25 14:00	05/23/25 18:32	1
Selenium	ND		0.0050	0.00089	mg/L		05/22/25 14:00	05/23/25 18:32	1
Thallium	ND		0.0010	0.00051	mg/L		05/22/25 14:00	05/23/25 18:32	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/03/25 02:20	06/03/25 15:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1100		10	10	mg/L			05/22/25 16:47	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.0		0.1	0.1	SU			05/22/25 12:19	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.975		0.486	0.494	1.00	0.571	pCi/L	05/27/25 08:14	06/18/25 21:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*30 - 110*	*05/27/25 08:14*	*06/18/25 21:12*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.03	U G	0.755	0.761	1.00	1.15	pCi/L	05/27/25 08:19	06/18/25 13:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.8*		*30 - 110*	*05/27/25 08:19*	*06/18/25 13:45*	*1*

Client Sample ID: WAP-1
Date Collected: 05/16/25 12:25
Date Received: 05/17/25 11:20

Lab Sample ID: 180-190649-1
Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*75.9*		*30 - 110*	*05/27/25 08:19*	*06/18/25 13:45*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**2.00**		0.898	0.907	5.00	1.15	pCi/L		06/19/25 17:08	1

Client Sample ID: WAP-8D

Date Collected: 05/16/25 11:36
Date Received: 05/17/25 11:20

Lab Sample ID: 180-190649-4

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**28**		1.0	0.71	mg/L			05/29/25 01:35	1
Fluoride	**0.14**		0.10	0.026	mg/L			05/29/25 01:35	1
Sulfate	**57**		1.0	0.76	mg/L			05/29/25 01:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.069**		0.050	0.012	mg/L		06/02/25 21:30	06/03/25 07:39	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/22/25 14:00	05/23/25 18:34	1
Arsenic	**0.0035**	**J**	0.0050	0.00075	mg/L		05/22/25 14:00	05/23/25 18:34	1
Barium	**0.088**		0.0050	0.00077	mg/L		05/22/25 14:00	05/23/25 18:34	1
Beryllium	ND		0.0010	0.00027	mg/L		05/22/25 14:00	05/23/25 18:34	1
Cadmium	ND		0.0010	0.000077	mg/L		05/22/25 14:00	05/23/25 18:34	1
Calcium	**48**		1.0	0.25	mg/L		05/22/25 14:00	05/23/25 18:34	1
Chromium	ND		0.0050	0.0012	mg/L		05/22/25 14:00	05/23/25 18:34	1
Cobalt	ND		0.0010	0.000086	mg/L		05/22/25 14:00	05/23/25 18:34	1
Lead	ND		0.0010	0.00045	mg/L		05/22/25 14:00	05/23/25 18:34	1
Lithium	ND		0.0080	0.0034	mg/L		05/22/25 14:00	05/23/25 18:34	1
Molybdenum	**0.0013**	**J**	0.0050	0.0011	mg/L		05/22/25 14:00	05/23/25 18:34	1
Selenium	ND		0.0050	0.00089	mg/L		05/22/25 14:00	05/23/25 18:34	1
Thallium	ND		0.0010	0.00051	mg/L		05/22/25 14:00	05/23/25 18:34	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/03/25 02:20	06/03/25 15:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**260**		10	10	mg/L			05/22/25 16:47	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**		0.1	0.1	SU			05/22/25 12:24	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.458**		0.238	0.241	1.00	0.281	pCi/L	05/27/25 08:14	06/18/25 21:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.0*		*30 - 110*	*05/27/25 08:14*	*06/18/25 21:12*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.580	U	0.399	0.403	1.00	0.598	pCi/L	05/27/25 08:19	06/18/25 13:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.0*		*30 - 110*	*05/27/25 08:19*	*06/18/25 13:45*	*1*

Client Sample ID: WAP-8D

Date Collected: 05/16/25 11:36
Date Received: 05/17/25 11:20

Lab Sample ID: 180-190649-4

Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*74.8*		*30 - 110*	*05/27/25 08:19*	*06/18/25 13:45*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**1.04**		0.465	0.470	5.00	0.598	pCi/L		06/19/25 17:08	1

Client Sample ID: CCR-AP-7

Date Collected: 05/15/25 09:26
Date Received: 05/17/25 11:20

Lab Sample ID: 180-190649-5

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**42**		1.0	0.71	mg/L			05/28/25 19:04	1
Fluoride	**0.34**		0.10	0.026	mg/L			05/28/25 19:04	1
Sulfate	**100**		5.0	3.8	mg/L			05/28/25 19:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.024**	**J**	0.050	0.012	mg/L		06/02/25 21:30	06/03/25 07:12	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/22/25 14:00	05/23/25 18:05	1
Arsenic	**0.0018**	**J**	0.0050	0.00075	mg/L		05/22/25 14:00	05/23/25 18:05	1
Barium	**0.12**		0.0050	0.00077	mg/L		05/22/25 14:00	05/23/25 18:05	1
Beryllium	ND		0.0010	0.00027	mg/L		05/22/25 14:00	05/23/25 18:05	1
Cadmium	ND		0.0010	0.000077	mg/L		05/22/25 14:00	05/23/25 18:05	1
Calcium	**130**		1.0	0.25	mg/L		05/22/25 14:00	05/23/25 18:05	1
Chromium	ND		0.0050	0.0012	mg/L		05/22/25 14:00	05/23/25 18:05	1
Cobalt	**0.00032**	**J**	0.0010	0.000086	mg/L		05/22/25 14:00	05/23/25 18:05	1
Lead	ND		0.0010	0.00045	mg/L		05/22/25 14:00	05/23/25 18:05	1
Lithium	**0.011**		0.0080	0.0034	mg/L		05/22/25 14:00	05/23/25 18:05	1
Molybdenum	ND		0.0050	0.0011	mg/L		05/22/25 14:00	05/23/25 18:05	1
Selenium	ND		0.0050	0.00089	mg/L		05/22/25 14:00	05/23/25 18:05	1
Thallium	ND		0.0010	0.00051	mg/L		05/22/25 14:00	05/23/25 18:05	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/03/25 02:20	06/03/25 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**880**		10	10	mg/L			05/22/25 16:47	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.1**		0.1	0.1	SU			05/22/25 13:06	1

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0487	U	0.0973	0.0974	1.00	0.251	pCi/L	05/27/25 08:14	06/18/25 21:12	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.8*		*30 - 110*	*05/27/25 08:14*	*06/18/25 21:12*	*1*

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.326	U	0.396	0.397	1.00	0.654	pCi/L	05/27/25 08:19	06/18/25 13:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*95.8*		*30 - 110*	*05/27/25 08:19*	*06/18/25 13:45*	*1*

Client Sample ID: CCR-AP-7
Lab Sample ID: 180-190649-5

Date Collected: 05/15/25 09:26
Matrix: Water
Date Received: 05/17/25 11:20

Method: SW846 9320 - Radium-228 (GFPC) (Continued)

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Y Carrier	*77.8*		*30 - 110*	*05/27/25 08:19*	*06/18/25 13:45*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.277	U	0.408	0.409	5.00	0.654	pCi/L		06/19/25 17:08	1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-496689/6
Matrix: Water
Analysis Batch: 496689

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			05/28/25 11:28	1
Fluoride	ND		0.10	0.026	mg/L			05/28/25 11:28	1
Sulfate	ND		1.0	0.76	mg/L			05/28/25 11:28	1

Lab Sample ID: LCS 180-496689/7
Matrix: Water
Analysis Batch: 496689

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	52.4		mg/L		105	80 - 120
Fluoride	2.50	2.34		mg/L		94	80 - 120
Sulfate	50.0	46.5		mg/L		93	80 - 120

Lab Sample ID: 180-190649-5 MS
Matrix: Water
Analysis Batch: 496689

Client Sample ID: CCR-AP-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	38		250	301		mg/L		105	80 - 120
Fluoride	0.34	J F1	12.5	15.8	F1	mg/L		123	80 - 120
Sulfate	100		250	364		mg/L		106	80 - 120

Lab Sample ID: 180-190649-5 MSD
Matrix: Water
Analysis Batch: 496689

Client Sample ID: CCR-AP-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	38		250	302		mg/L		105	80 - 120	0	15
Fluoride	0.34	J F1	12.5	17.5	F1	mg/L		137	80 - 120	10	15
Sulfate	100		250	364		mg/L		105	80 - 120	0	15

Method: EPA 6010D - Metals (ICP)

Lab Sample ID: MB 410-651908/1-A
Matrix: Water
Analysis Batch: 652188

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 651908

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		06/02/25 21:30	06/03/25 07:02	1

Lab Sample ID: LCS 410-651908/2-A
Matrix: Water
Analysis Batch: 652188

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 651908

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.500	0.510		mg/L		102	83 - 119

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

Lab Sample ID: LCSD 410-651908/3-A
Matrix: Water
Analysis Batch: 652188

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 651908

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron			0.500	0.508		mg/L		102	83 - 119	0	20

Lab Sample ID: 180-190649-5 MS
Matrix: Water
Analysis Batch: 652188

Client Sample ID: CCR-AP-7
Prep Type: Total Recoverable
Prep Batch: 651908

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.024	J	0.500	0.534		mg/L		102	75 - 125

Lab Sample ID: 180-190649-5 MSD
Matrix: Water
Analysis Batch: 652188

Client Sample ID: CCR-AP-7
Prep Type: Total Recoverable
Prep Batch: 651908

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	0.024	J	0.500	0.530		mg/L		101	75 - 125	1	20

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-657091/1-A
Matrix: Water
Analysis Batch: 657404

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 657091

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		05/22/25 14:00	05/23/25 18:00	1
Arsenic	ND		0.0050	0.00075	mg/L		05/22/25 14:00	05/23/25 18:00	1
Barium	ND		0.0050	0.00077	mg/L		05/22/25 14:00	05/23/25 18:00	1
Beryllium	ND		0.0010	0.00027	mg/L		05/22/25 14:00	05/23/25 18:00	1
Cadmium	ND		0.0010	0.000077	mg/L		05/22/25 14:00	05/23/25 18:00	1
Calcium	ND		1.0	0.25	mg/L		05/22/25 14:00	05/23/25 18:00	1
Chromium	ND		0.0050	0.0012	mg/L		05/22/25 14:00	05/23/25 18:00	1
Cobalt	ND		0.0010	0.000086	mg/L		05/22/25 14:00	05/23/25 18:00	1
Lead	ND		0.0010	0.00045	mg/L		05/22/25 14:00	05/23/25 18:00	1
Lithium	ND		0.0080	0.0034	mg/L		05/22/25 14:00	05/23/25 18:00	1
Molybdenum	ND		0.0050	0.0011	mg/L		05/22/25 14:00	05/23/25 18:00	1
Selenium	ND		0.0050	0.00089	mg/L		05/22/25 14:00	05/23/25 18:00	1
Thallium	ND		0.0010	0.00051	mg/L		05/22/25 14:00	05/23/25 18:00	1

Lab Sample ID: LCS 240-657091/2-A
Matrix: Water
Analysis Batch: 657404

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 657091

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony			0.100	0.0922		mg/L		92	80 - 120
Arsenic			1.00	0.921		mg/L		92	80 - 120
Barium			1.00	0.927		mg/L		93	80 - 120
Beryllium			0.500	0.457		mg/L		91	80 - 120
Cadmium			0.500	0.451		mg/L		90	80 - 120
Calcium			25.0	23.2		mg/L		93	80 - 120
Chromium			0.500	0.462		mg/L		92	80 - 120
Cobalt			0.500	0.453		mg/L		91	80 - 120

Method: EPA 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-657091/2-A
Matrix: Water
Analysis Batch: 657404

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 657091

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lead			0.500	0.504		mg/L		101	80 - 120		
Lithium			0.500	0.500		mg/L		100	80 - 120		
Molybdenum			0.500	0.461		mg/L		92	80 - 120		
Selenium			1.00	0.915		mg/L		91	80 - 120		
Thallium			1.00	1.07		mg/L		107	80 - 120		

Lab Sample ID: 180-190649-5 MS
Matrix: Water
Analysis Batch: 657404

Client Sample ID: CCR-AP-7
Prep Type: Total Recoverable
Prep Batch: 657091

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony	ND		0.100	0.0981		mg/L		98	80 - 120		
Arsenic	0.0018	J	1.00	0.971		mg/L		97	80 - 120		
Barium	0.12		1.00	1.08		mg/L		96	80 - 120		
Beryllium	ND		0.500	0.484		mg/L		97	80 - 120		
Cadmium	ND		0.500	0.466		mg/L		93	80 - 120		
Calcium	130		25.0	148	4	mg/L		65	80 - 120		
Chromium	ND		0.500	0.482		mg/L		96	80 - 120		
Cobalt	0.00032	J	0.500	0.462		mg/L		92	80 - 120		
Lead	ND		0.500	0.519		mg/L		104	80 - 120		
Lithium	0.011		0.500	0.536		mg/L		105	80 - 120		
Molybdenum	ND		0.500	0.486		mg/L		97	80 - 120		
Selenium	ND		1.00	0.972		mg/L		97	80 - 120		
Thallium	ND		1.00	1.12		mg/L		112	80 - 120		

Lab Sample ID: 180-190649-5 MSD
Matrix: Water
Analysis Batch: 657404

Client Sample ID: CCR-AP-7
Prep Type: Total Recoverable
Prep Batch: 657091

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		0.100	0.0938		mg/L		94	80 - 120	5	20
Arsenic	0.0018	J	1.00	0.929		mg/L		93	80 - 120	4	20
Barium	0.12		1.00	1.05		mg/L		92	80 - 120	4	20
Beryllium	ND		0.500	0.464		mg/L		93	80 - 120	4	20
Cadmium	ND		0.500	0.449		mg/L		90	80 - 120	4	20
Calcium	130		25.0	143	4	mg/L		44	80 - 120	4	20
Chromium	ND		0.500	0.463		mg/L		93	80 - 120	4	20
Cobalt	0.00032	J	0.500	0.449		mg/L		90	80 - 120	3	20
Lead	ND		0.500	0.501		mg/L		100	80 - 120	3	20
Lithium	0.011		0.500	0.504		mg/L		99	80 - 120	6	20
Molybdenum	ND		0.500	0.469		mg/L		94	80 - 120	3	20
Selenium	ND		1.00	0.914		mg/L		91	80 - 120	6	20
Thallium	ND		1.00	1.08		mg/L		108	80 - 120	4	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 410-651938/1-A
Matrix: Water
Analysis Batch: 652526

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 651938

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/03/25 02:20	06/03/25 15:32	1

Lab Sample ID: LCS 410-651938/2-A
Matrix: Water
Analysis Batch: 652526

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 651938

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.00100	0.000936		mg/L		94	80 - 118		

Lab Sample ID: 180-190649-5 MS
Matrix: Water
Analysis Batch: 652526

Client Sample ID: CCR-AP-7
Prep Type: Total/NA
Prep Batch: 651938

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	ND		0.00100	0.000982		mg/L		98	80 - 120		

Lab Sample ID: 180-190649-5 MSD
Matrix: Water
Analysis Batch: 652526

Client Sample ID: CCR-AP-7
Prep Type: Total/NA
Prep Batch: 651938

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		0.00100	0.000893		mg/L		89	80 - 120	9	20

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-496436/1
Matrix: Water
Analysis Batch: 496436

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
pH			7.00	7.0		SU		100	99 - 101		

Lab Sample ID: LCS 180-496436/24
Matrix: Water
Analysis Batch: 496436

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
pH			7.00	7.0		SU		100	99 - 101		

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

Lab Sample ID: MB 180-496475/1
Matrix: Water
Analysis Batch: 496475

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		10	10	mg/L			05/22/25 16:47	1

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

Lab Sample ID: LCS 180-496475/2
Matrix: Water
Analysis Batch: 496475

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	420	386		mg/L		92	85 - 115

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-719392/1-A
Matrix: Water
Analysis Batch: 723120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 719392

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1135	U	0.172	0.172	1.00	0.296	pCi/L	05/27/25 08:14	06/18/25 21:12	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*86.8*		*30 - 110*	*05/27/25 08:14*	*06/18/25 21:12*	*1*

Lab Sample ID: LCS 160-719392/2-A
Matrix: Water
Analysis Batch: 723120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 719392

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-226	9.58	9.790		1.27	1.00	0.311	pCi/L	102	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*92.5*		*30 - 110*

Lab Sample ID: 180-190649-5 DU
Matrix: Water
Analysis Batch: 723120

Client Sample ID: CCR-AP-7
Prep Type: Total/NA
Prep Batch: 719392

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	-0.0487	U	0.04087	U	0.134	1.00	0.261	pCi/L	0.39	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*96.0*		*30 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-719393/1-A
Matrix: Water
Analysis Batch: 723120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 719393

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3722	U	0.323	0.325	1.00	0.502	pCi/L	05/27/25 08:19	06/18/25 13:45	1

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: MB 160-719393/1-A
Matrix: Water
Analysis Batch: 723120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 719393

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	86.8		30 - 110	05/27/25 08:19	06/18/25 13:45	1
Y Carrier	77.8		30 - 110	05/27/25 08:19	06/18/25 13:45	1

Lab Sample ID: LCS 160-719393/2-A
Matrix: Water
Analysis Batch: 723120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 719393

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium-228			9.34	10.47		1.40	1.00	0.566	pCi/L	112	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	92.5		30 - 110
Y Carrier	80.0		30 - 110

Lab Sample ID: 180-190649-5 DU
Matrix: Water
Analysis Batch: 723120

Client Sample ID: CCR-AP-7
Prep Type: Total/NA
Prep Batch: 719393

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium-228	0.326	U		0.3484	U	0.315	1.00	0.494	pCi/L			0.03	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	96.0		30 - 110
Y Carrier	80.7		30 - 110

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Lab Sample ID: 180-190649-5 DU
Matrix: Water
Analysis Batch: 722908

Client Sample ID: CCR-AP-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Combined Radium 226 + 228	0.277	U		0.3893	U	0.342	5.00	0.494	pCi/L			0.15	

HPLC/IC

Analysis Batch: 496689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total/NA	Water	EPA 9056A	
180-190649-1	WAP-1	Total/NA	Water	EPA 9056A	
180-190649-4	WAP-8D	Total/NA	Water	EPA 9056A	
180-190649-5	CCR-AP-7	Total/NA	Water	EPA 9056A	
180-190649-5	CCR-AP-7	Total/NA	Water	EPA 9056A	
MB 180-496689/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-496689/7	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-190649-5 MS	CCR-AP-7	Total/NA	Water	EPA 9056A	
180-190649-5 MSD	CCR-AP-7	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 651908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total Recoverable	Water	3005A	
180-190649-4	WAP-8D	Total Recoverable	Water	3005A	
180-190649-5	CCR-AP-7	Total Recoverable	Water	3005A	
MB 410-651908/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-651908/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 410-651908/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
180-190649-5 MS	CCR-AP-7	Total Recoverable	Water	3005A	
180-190649-5 MSD	CCR-AP-7	Total Recoverable	Water	3005A	

Prep Batch: 651938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total/NA	Water	7470A	
180-190649-4	WAP-8D	Total/NA	Water	7470A	
180-190649-5	CCR-AP-7	Total/NA	Water	7470A	
MB 410-651938/1-A	Method Blank	Total/NA	Water	7470A	
LCS 410-651938/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-190649-5 MS	CCR-AP-7	Total/NA	Water	7470A	
180-190649-5 MSD	CCR-AP-7	Total/NA	Water	7470A	

Analysis Batch: 652188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total Recoverable	Water	EPA 6010D	651908
180-190649-4	WAP-8D	Total Recoverable	Water	EPA 6010D	651908
180-190649-5	CCR-AP-7	Total Recoverable	Water	EPA 6010D	651908
MB 410-651908/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	651908
LCS 410-651908/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	651908
LCSD 410-651908/3-A	Lab Control Sample Dup	Total Recoverable	Water	EPA 6010D	651908
180-190649-5 MS	CCR-AP-7	Total Recoverable	Water	EPA 6010D	651908
180-190649-5 MSD	CCR-AP-7	Total Recoverable	Water	EPA 6010D	651908

Analysis Batch: 652526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total/NA	Water	EPA 7470A	651938
180-190649-4	WAP-8D	Total/NA	Water	EPA 7470A	651938
180-190649-5	CCR-AP-7	Total/NA	Water	EPA 7470A	651938
MB 410-651938/1-A	Method Blank	Total/NA	Water	EPA 7470A	651938
LCS 410-651938/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	651938

Metals (Continued)

Analysis Batch: 652526 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-5 MS	CCR-AP-7	Total/NA	Water	EPA 7470A	651938
180-190649-5 MSD	CCR-AP-7	Total/NA	Water	EPA 7470A	651938

Prep Batch: 657091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total Recoverable	Water	3005A	
180-190649-4	WAP-8D	Total Recoverable	Water	3005A	
180-190649-5	CCR-AP-7	Total Recoverable	Water	3005A	
MB 240-657091/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-657091/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-190649-5 MS	CCR-AP-7	Total Recoverable	Water	3005A	
180-190649-5 MSD	CCR-AP-7	Total Recoverable	Water	3005A	

Analysis Batch: 657404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total Recoverable	Water	EPA 6020B	657091
180-190649-4	WAP-8D	Total Recoverable	Water	EPA 6020B	657091
180-190649-5	CCR-AP-7	Total Recoverable	Water	EPA 6020B	657091
MB 240-657091/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	657091
LCS 240-657091/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	657091
180-190649-5 MS	CCR-AP-7	Total Recoverable	Water	EPA 6020B	657091
180-190649-5 MSD	CCR-AP-7	Total Recoverable	Water	EPA 6020B	657091

General Chemistry

Analysis Batch: 496436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total/NA	Water	EPA 9040C	
180-190649-4	WAP-8D	Total/NA	Water	EPA 9040C	
180-190649-5	CCR-AP-7	Total/NA	Water	EPA 9040C	
LCS 180-496436/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
LCS 180-496436/24	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 496475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total/NA	Water	SM 2540C	
180-190649-4	WAP-8D	Total/NA	Water	SM 2540C	
180-190649-5	CCR-AP-7	Total/NA	Water	SM 2540C	
MB 180-496475/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-496475/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 719392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total/NA	Water	PrecSep-21	
180-190649-4	WAP-8D	Total/NA	Water	PrecSep-21	
180-190649-5	CCR-AP-7	Total/NA	Water	PrecSep-21	
MB 160-719392/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-719392/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-190649-5 DU	CCR-AP-7	Total/NA	Water	PrecSep-21	

Rad

Prep Batch: 719393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-190649-1	WAP-1	Total/NA	Water	PrecSep_0	
180-190649-4	WAP-8D	Total/NA	Water	PrecSep_0	
180-190649-5	CCR-AP-7	Total/NA	Water	PrecSep_0	
MB 160-719393/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-719393/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-190649-5 DU	CCR-AP-7	Total/NA	Water	PrecSep_0	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

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Client Information	Sampler: MARK BRETINZ	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-112838-14503.2
Client Contact: Britton Hundley	Phone: 317 313 8306	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: IN	Page: Page 2 of 3
Company: Haley & Aldrich, Inc.	PWSID:	Analysis Requested		Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			Preservation Codes: N - None D - HNO3
City: Greenville	TAT Requested (days): 5+d			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich.com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site	SSOW#:			

180-190649 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A	6010D - Boron by 6010D	Total Number of conta	Other: / Special Instructions/Note:
			Preservation Code:		X	X	N	N	D	D	D	D	X	
~~WAP-6I~~ WAP-1	5/16/25	12:25	G	Water	N	N	X	X	X	X	X	X	5	
~~WAP-6D~~ (mg) 5/15/25				Water										
~~WAP-7S~~				Water										
~~WAP-7D~~				Water										
WAP-8S	5/15/25	12:58	G	Water	N	N	X	X	X	X	X	X	6	
WAP-8I	5/15/25	14:19	G	Water	N	N	X	X	X	X	X	X	6	
WAP-8D	5/16/25	11:36	G	Water	N	N	X	X	X	X	X	X	6	
~~WAP-9S~~				Water										
~~WAP-9I~~				Water										
~~WAP-9D~~				Water									6	(mg)
CCR-AP-7	5/15/25	09:26	G	Water	N	Y	X	X	X	X	X	X	~~12~~	MS/MSD 2

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Mark Bretinz	5/16/25 6:50pm	ATLAS		5/17/25 1120	EPAMS
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
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.

Ver: 10/10/2024

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: MARK BRETING	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-112838-14503.3
Client Contact: Britton Hundley	Phone: 317 313 8306	E-Mail: Andy Johnson@et.eurofinsus.com	State of Origin: IN	Page: Page 2 of 2
Company: Haley & Aldrich, Inc.	PWSID:			Job #:
Address: 400 Augusta Street Suite 100	Due Date Requested:			
City: Greenville	TAT Requested (days):			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich com	WO #: See Chain			
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site	SSOW#:			

Analysis Requested

Preservation Codes:
N - None
D - HNO3
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A	6010D - Boron by 6010D	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D	D		
DUP 1				Water										
DUP 2				Water										
FIELD BLANK 1				Water										
MS 1				Water										
MSD 1				Water										
MS 2	5/15/25	09:26	G	Water	N	Y	X	X	X	X	X	X	6	Collected at CCR-AP-7
MSD 2	5/15/25	09:26	G	Water	N	Y	X	X	X	X	X	X	6	↓ ↓
EXTRA				Water										
EXTRA				Water										

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mark Breting	5/16/25 0650pm	AT&S		5/17/25 1120	EFTNC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
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

Ver: 10/10/2024

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6/23/2025


SATURDAY 12:00P
PRIORITY OVERNIGHT
59 6082 3925
AGCA
15238
PA-US
PIT
Uncorrected temp
Thermometer ID
CF -0.7
Initials
2.5 °C
25
T-WI-SR-001 effective 11/8/18
FedEx
TRK# 4359 6082 7931
XO AGCA
2.3 °C
25
CF -0.7
Initials
180-190649 Waybill
FedEx
TRK# 4359 6082 4152
XO AGCA
4.3 °C
25
CF -0.7
Initials
PT-WI-SR-001 effective 11/8/18
FedEx
TRK# 4359 6082 7942
XO AGCA
3.1 °C
25
CF -0.7
Initials
PT-WI-SR-001 effective 11/8/18
FedEx
TRK# 4359 6082 4141
XO AGCA
2.1 °C
25
CF -0.7
Initials
PT-WI-SR-001 effective 11/8/18
PA-US
DELIVER MON-SAT
SEED - 600
05/17-05/18

190649.

SM/LH EP: HNG 5/19/25 9:15

Dup-1

WAP-8-S

WAP-8I

& Metals, Radd *

* Do do WS + Rad Chilled

TDS-9056, pH only rad Temp




180-190649 Waybill

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Johnson, Andy	Carrier Tracking No(s): N/A	COC No: 180-538896.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): N/A		Job #: 180-190649-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 6/23/2025			Preservation Codes: -
City: Earth City	TAT Requested (days): N/A			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: CCR Groundwater Monitoring FB Culley West	Project #: 18016014			Other: N/A
Site: N/A	SSOW#: N/A			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra226/PrecSep_21 Radium-226 (GFPC) by 9315 (21-day decay)	9320_Ra228/PrecSep_0 Radium-228 (GFPC) by 9320	Ra226Ra228_GFPC/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
WAP-1 (180-190649-1)	5/16/25	12:25 Eastern	G	Water			X	X	X	1	
WAP-8S (180-190649-2)	5/15/25	12:58 Eastern	G	Water			X	X	X	2	
WAP-8I (180-190649-3)	5/15/25	14:19 Eastern	G	Water			X	X	X	2	
WAP-8D (180-190649-4)	5/16/25	11:36 Eastern	G	Water			X	X	X	2	
CCR-AP-7 (180-190649-5)	5/15/25	09:26 Eastern	G	Water			X	X	X	2	
CCR-AP-7 (180-190649-5DU)	5/15/25	09:26 Eastern	G	Water			X	X	X	4	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	5/20/25 1700	BTAMS	M. Pinette	MAY 22 2025 1445	
2	Relinquished by:	Date/Time:	Company	Received by: Meadow Pinette	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-190649-1
SDG Number: FB Culley West

Login Number: 190649
List Number: 1
Creator: Watson, Debbie

List Source: Eurofins Pittsburgh

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.	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?	True	
There are no discrepancies between the containers received and the COC.	False	
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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-190649-1
SDG Number: FB Culley West

Login Number: 190649
List Number: 2
Creator: Kovitch, Christina M

List Source: Eurofins Pittsburgh

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.	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	MELTED ICE MISSING COOLER
Cooler Temperature is acceptable.	False	
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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-190649-1
SDG Number: FB Culley West

Login Number: 190649
List Number: 5
Creator: Pinette, Meadow L

List Source: Eurofins St. Louis
List Creation: 05/22/25 03:40 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.	N/A	
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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

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1 2 3 4 5 6 7 8 9 10 11 12 13

ANALYTICAL REPORT

PREPARED FOR

Attn: Todd Plating
Haley & Aldrich, Inc.
400 Augusta Street
Suite 100
Greenville, South Carolina 29601

Generated 6/18/2025 6:47:24 PM

JOB DESCRIPTION

CCR Groundwater Monitoring FB Culley West
FB Culley West

JOB NUMBER

180-191166-2

Eurofins Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh PA 15238

See page two for job notes and contact information.

myEOL

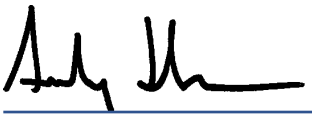
Job Notes

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.

PA Lab ID: 02-00416

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 Pittsburgh Project Manager.

Authorization



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Authorized for release by
Andy Johnson, Senior Project Manager
Andy.Johnson@et.eurofinsus.com
(615)818-9567

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Job ID: 180-191166-2 Eurofins Pittsburgh

Job Narrative
180-191166-2

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 6/3/2025 9:05 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.9°C and 4.2°C.

HPLC/IC
Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: WAP-2RR-053025 (180-191166-1), WAP-3S-053025 (180-191166-2), WAP-3D-053025 (180-191166-3), WAP-7S-053025 (180-191166-4), WAP-7D-053025 (180-191166-5) and WAP-8S-053025 (180-191166-6). Elevated reporting limits (RLs) are provided.

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.

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-191166-2
SDG: FB Culley West

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-191166-2
SDG: FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00690	06-28-25
California	State	3122	05-30-26
Connecticut	State	PH-0820	09-30-26
Florida	NELAP	E871008	06-30-25
Georgia	State	PA 02-00416	04-30-26
Illinois	NELAP	200005	07-31-25
Kansas	NELAP	E-10350	01-31-26
Kentucky (UST)	State	162013	04-30-26
Kentucky (WW)	State	KY98043	12-31-25
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-25
Maine	State	PA00164	03-06-26
Minnesota	NELAP	042-999-482	12-31-25
New Hampshire	NELAP	2030	04-04-26
New Jersey	NELAP	PA005	06-30-25
New York	NELAP	11182	03-31-26
North Carolina (WW/SW)	State	434	12-31-25
North Dakota	State	R-227	04-30-24 *
Oregon	NELAP	PA-2151	02-06-26
Pennsylvania	NELAP	02-00416	04-30-26
Rhode Island	State	LAO00375	12-30-25
South Carolina	State	89014	04-30-25 *
Texas	NELAP	T104704528	03-31-26
US Fish & Wildlife	US Federal Programs	A21930	04-30-26
USDA	US Federal Programs	P330-16-00211	04-11-26
Utah	NELAP	PA001462024-14	03-31-24 *
Virginia	NELAP	460189	09-14-25
West Virginia DEP	State	142	01-31-26
Wisconsin	State	998027800	08-31-25

Laboratory: Eurofins Cleveland

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

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0806	12-31-26
Georgia	State	4062	02-27-26
Illinois	NELAP	200004	08-31-25
Iowa	State	421	06-01-25 *
Kansas	NELAP	E-10336	01-31-26
Kentucky (UST)	State	112225	02-28-26
Kentucky (WW)	State	KY98016	12-31-25
Minnesota	NELAP	039-999-348	12-31-25
New Hampshire	NELAP	225024	09-30-25
New Jersey	NELAP	OH001	07-03-25
New York	NELAP	10975	04-01-26
North Dakota	State	R-244	02-27-26
Ohio	State	8303	11-04-25
Ohio VAP	State	ORELAP 4062	02-28-26
Oregon	NELAP	4062	02-27-26
Pennsylvania	NELAP	68-00340	08-31-25

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 180-191166-2
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Laboratory: Eurofins Cleveland (Continued)

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704517-22-19	08-31-25
US Fish & Wildlife	US Federal Programs	A26406	02-28-26
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-25
West Virginia DEP	State	210	12-31-25
Wisconsin	State	399167560	08-31-25

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-26
Alaska	State	PA00009	06-30-25
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-26
Arkansas DEQ	State	88-00660	08-09-25
California	State	2792	01-31-26
Colorado	State	PA00009	06-30-25
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-26
Delaware (DW)	State	N/A	01-31-26
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-26
Illinois	NELAP	200027	01-31-26
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-25
Kentucky (DW)	State	KY90088	12-31-25
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-25
Louisiana (All)	NELAP	02055	06-30-25
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-26
Minnesota	NELAP	042-999-487	12-31-25
Mississippi	State	023	01-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-26
Nebraska	State	NE-OS-32-17	01-31-26
New Hampshire	NELAP	2730	01-10-26
New Jersey	NELAP	PA011	06-30-25
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-25
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-25
Oregon	NELAP	PA200001	09-11-25

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

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Job ID: 180-191166-2
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	36-00037	01-31-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-25
South Carolina	State	89002	01-31-26
Tennessee	State	02838	01-31-26
Texas	NELAP	T104704194-23-46	08-31-25
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-25
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26
West Virginia (DW)	State	9906 C	03-31-26
West Virginia DEP	State	055	07-31-25
Wyoming	State	8TMS-L	01-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-191166-2
SDG: FB Culley West

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-191166-1	WAP-2RR-053025	Water	05/30/25 11:50	06/03/25 09:05
180-191166-2	WAP-3S-053025	Water	05/30/25 15:05	06/03/25 09:05
180-191166-3	WAP-3D-053025	Water	05/30/25 15:55	06/03/25 09:05
180-191166-4	WAP-7S-053025	Water	05/30/25 13:45	06/03/25 09:05
180-191166-5	WAP-7D-053025	Water	05/30/25 12:55	06/03/25 09:05
180-191166-6	WAP-8S-053025	Water	05/30/25 18:00	06/03/25 09:05
180-191166-7	WAP-8I-053025	Water	05/30/25 17:15	06/03/25 09:05

Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-191166-2
SDG: FB Culley West

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	EET PIT
EPA 6010D	Metals (ICP)	SW846	ELLE
EPA 6020B	Metals (ICP/MS)	SW846	EET CLE
EPA 7470A	Mercury (CVAA)	SW846	ELLE
EPA 9040C	pH	SW846	EET PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
7470A	Preparation, Mercury	SW846	ELLE

Protocol References:

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 CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Lab Chronicle

Client: Haley & Aldrich, Inc.
Job ID: 180-191166-2
Project/Site: CCR Groundwater Monitoring FB Culley West
SDG: FB Culley West

Client Sample ID: WAP-2RR-053025
Lab Sample ID: 180-191166-1
Date Collected: 05/30/25 11:50
Matrix: Water
Date Received: 06/03/25 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	497463	06/10/25 16:26	ERP	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	655156	06/10/25 06:35	UJL8	ELLE
Total Recoverable	Analysis	EPA 6010D		1			656382	06/11/25 17:03	T8CQ	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	659210	06/10/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			659511	06/11/25 15:06	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20.0 mL	20.0 mL	658634	06/17/25 10:40	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			659095	06/17/25 18:52	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			497222	06/05/25 10:56	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497238	06/05/25 13:50	LWM	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-3S-053025
Lab Sample ID: 180-191166-2
Date Collected: 05/30/25 15:05
Matrix: Water
Date Received: 06/03/25 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	497463	06/10/25 16:55	ERP	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	655156	06/10/25 06:35	UJL8	ELLE
Total Recoverable	Analysis	EPA 6010D		1			656382	06/11/25 17:34	T8CQ	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	659210	06/10/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			659511	06/11/25 15:09	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20.0 mL	656666	06/16/25 23:55	UAMX	ELLE
Total/NA	Analysis	EPA 7470A		1			659095	06/17/25 16:51	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			497201	06/04/25 14:03	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497238	06/05/25 13:50	LWM	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-3D-053025
Lab Sample ID: 180-191166-3
Date Collected: 05/30/25 15:55
Matrix: Water
Date Received: 06/03/25 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	497463	06/10/25 17:24	ERP	EET PIT
	Instrument ID: INTEGRION									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-191166-2
SDG: FB Culley West

Client Sample ID: WAP-3D-053025

Lab Sample ID: 180-191166-3
Matrix: Water
Date Collected: 05/30/25 15:55
Date Received: 06/03/25 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	497463	06/10/25 17:39	ERP	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	655156	06/10/25 06:35	UJL8	ELLE
Total Recoverable	Analysis	EPA 6010D		1			656382	06/11/25 17:37	T8CQ	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	659210	06/10/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			659511	06/11/25 15:12	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20.0 mL	656666	06/16/25 23:55	UAMX	ELLE
Total/NA	Analysis	EPA 7470A		1			659095	06/17/25 16:13	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			497222	06/05/25 11:10	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497238	06/05/25 13:50	LWM	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-7S-053025

Lab Sample ID: 180-191166-4
Matrix: Water
Date Collected: 05/30/25 13:45
Date Received: 06/03/25 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	497463	06/10/25 17:53	ERP	EET PIT
	Instrument ID: INTEGRION									
Total/NA	Analysis	EPA 9056A		5	1 mL	1 mL	497463	06/10/25 18:37	ERP	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	655156	06/10/25 06:35	UJL8	ELLE
Total Recoverable	Analysis	EPA 6010D		5			656382	06/11/25 17:59	T8CQ	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	659210	06/10/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			659511	06/11/25 15:14	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20.0 mL	656666	06/16/25 23:55	UAMX	ELLE
Total/NA	Analysis	EPA 7470A		1			659095	06/17/25 16:20	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			497222	06/05/25 11:05	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497238	06/05/25 13:50	LWM	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-7D-053025

Lab Sample ID: 180-191166-5
Matrix: Water
Date Collected: 05/30/25 12:55
Date Received: 06/03/25 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	497463	06/10/25 18:51	ERP	EET PIT
	Instrument ID: INTEGRION									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-191166-2
SDG: FB Culley West

Client Sample ID: WAP-7D-053025

Lab Sample ID: 180-191166-5

Date Collected: 05/30/25 12:55
Date Received: 06/03/25 09:05

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		10	1 mL	1 mL	497463	06/10/25 19:06	ERP	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	655156	06/10/25 06:35	UJL8	ELLE
Total Recoverable	Analysis	EPA 6010D		5			656382	06/11/25 18:36	T8CQ	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	659210	06/10/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			659511	06/11/25 15:17	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20.0 mL	20.0 mL	658634	06/17/25 10:40	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			659095	06/17/25 18:54	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			497222	06/05/25 11:00	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497238	06/05/25 13:50	LWM	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-8S-053025

Lab Sample ID: 180-191166-6

Date Collected: 05/30/25 18:00
Date Received: 06/03/25 09:05

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	497463	06/10/25 19:20	ERP	EET PIT
	Instrument ID: INTEGRION									
Total Recoverable	Prep	3005A			50 mL	50 mL	655156	06/10/25 06:35	UJL8	ELLE
Total Recoverable	Analysis	EPA 6010D		1			656382	06/11/25 17:47	T8CQ	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	659210	06/10/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			659511	06/11/25 15:19	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20.0 mL	20.0 mL	658634	06/17/25 10:40	X3ZX	ELLE
Total/NA	Analysis	EPA 7470A		1			659095	06/17/25 18:56	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			497222	06/05/25 11:19	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497238	06/05/25 13:50	LWM	EET PIT
	Instrument ID: NOEQUIP									

Client Sample ID: WAP-8I-053025

Lab Sample ID: 180-191166-7

Date Collected: 05/30/25 17:15
Date Received: 06/03/25 09:05

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	497463	06/10/25 19:49	ERP	EET PIT
	Instrument ID: INTEGRION									

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-191166-2
SDG: FB Culley West

Client Sample ID: WAP-8I-053025

Date Collected: 05/30/25 17:15
Date Received: 06/03/25 09:05

Lab Sample ID: 180-191166-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	655156	06/10/25 06:35	UJL8	ELLE
Total Recoverable	Analysis	EPA 6010D		1			656382	06/11/25 17:50	T8CQ	ELLE
	Instrument ID: T75 - 27278									
Total Recoverable	Prep	3005A			50 mL	50 mL	659210	06/10/25 14:00	BN	EET CLE
Total Recoverable	Analysis	EPA 6020B		1			659511	06/11/25 15:22	S4FJ	EET CLE
	Instrument ID: I15									
Total/NA	Prep	7470A			20 mL	20.0 mL	656666	06/16/25 23:55	UAMX	ELLE
Total/NA	Analysis	EPA 7470A		1			659095	06/17/25 16:22	IJ3I	ELLE
	Instrument ID: M10 – 31820									
Total/NA	Analysis	EPA 9040C		1			497222	06/05/25 11:14	BAB	EET PIT
	Instrument ID: OZ									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	497238	06/05/25 13:50	LWM	EET PIT
	Instrument ID: NOEQUIP									

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Analyst References:

Lab: EET CLE
- Batch Type: Prep
  - BN = Benjamin Norman
- Batch Type: Analysis
  - S4FJ = Katherine Wise

Lab: EET PIT
- Batch Type: Analysis
  - BAB = Brooke Batyi
  - ERP = Evan Papak
  - LWM = Leslie McIntire

Lab: ELLE
- Batch Type: Prep
  - UAMX = Annamaria Kuhns
  - UJL8 = James Mertz
  - X3ZX = Skyler Ruf
- Batch Type: Analysis
  - IJ3I = Elizabeth Brittingham
  - T8CQ = Sera Bargo

Client Sample ID: WAP-2RR-053025
Lab Sample ID: 180-191166-1

Date Collected: 05/30/25 11:50
Matrix: Water
Date Received: 06/03/25 09:05

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**40**		1.0	0.71	mg/L			06/10/25 16:26	1
Fluoride	**0.25**		0.10	0.026	mg/L			06/10/25 16:26	1
Sulfate	**110**		1.0	0.76	mg/L			06/10/25 16:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.5**		0.050	0.012	mg/L		06/10/25 06:35	06/11/25 17:03	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/10/25 14:00	06/11/25 15:06	1
Arsenic	**0.0013**	**J**	0.0050	0.00075	mg/L		06/10/25 14:00	06/11/25 15:06	1
Barium	**0.029**		0.0050	0.00077	mg/L		06/10/25 14:00	06/11/25 15:06	1
Beryllium	ND		0.0010	0.00027	mg/L		06/10/25 14:00	06/11/25 15:06	1
Cadmium	**0.00037**	**J**	0.0010	0.000077	mg/L		06/10/25 14:00	06/11/25 15:06	1
Calcium	**110**		1.0	0.25	mg/L		06/10/25 14:00	06/11/25 15:06	1
Chromium	ND		0.0050	0.0012	mg/L		06/10/25 14:00	06/11/25 15:06	1
Cobalt	**0.0014**		0.0010	0.000086	mg/L		06/10/25 14:00	06/11/25 15:06	1
Lead	ND		0.0010	0.00045	mg/L		06/10/25 14:00	06/11/25 15:06	1
Lithium	**0.020**		0.0080	0.0034	mg/L		06/10/25 14:00	06/11/25 15:06	1
Molybdenum	**0.079**		0.0050	0.0011	mg/L		06/10/25 14:00	06/11/25 15:06	1
Selenium	**0.0039**	**J**	0.0050	0.00089	mg/L		06/10/25 14:00	06/11/25 15:06	1
Thallium	ND		0.0010	0.00051	mg/L		06/10/25 14:00	06/11/25 15:06	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/17/25 10:40	06/17/25 18:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**530**		10	10	mg/L			06/05/25 13:50	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**6.7**	**HF**	0.1	0.1	SU			06/05/25 10:56	1

Client Sample ID: WAP-3S-053025
Lab Sample ID: 180-191166-2

Date Collected: 05/30/25 15:05
Matrix: Water
Date Received: 06/03/25 09:05

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**47**		1.0	0.71	mg/L			06/10/25 16:55	1
Fluoride	**0.38**		0.10	0.026	mg/L			06/10/25 16:55	1
Sulfate	**190**		1.0	0.76	mg/L			06/10/25 16:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.8**		0.050	0.012	mg/L		06/10/25 06:35	06/11/25 17:34	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/10/25 14:00	06/11/25 15:09	1
Arsenic	**0.00095**	**J**	0.0050	0.00075	mg/L		06/10/25 14:00	06/11/25 15:09	1
Barium	**0.045**		0.0050	0.00077	mg/L		06/10/25 14:00	06/11/25 15:09	1
Beryllium	ND		0.0010	0.00027	mg/L		06/10/25 14:00	06/11/25 15:09	1
Cadmium	**0.000093**	**J**	0.0010	0.000077	mg/L		06/10/25 14:00	06/11/25 15:09	1
Calcium	**110**		1.0	0.25	mg/L		06/10/25 14:00	06/11/25 15:09	1
Chromium	ND		0.0050	0.0012	mg/L		06/10/25 14:00	06/11/25 15:09	1
Cobalt	**0.00089**	**J**	0.0010	0.000086	mg/L		06/10/25 14:00	06/11/25 15:09	1
Lead	ND		0.0010	0.00045	mg/L		06/10/25 14:00	06/11/25 15:09	1
Lithium	**0.10**		0.0080	0.0034	mg/L		06/10/25 14:00	06/11/25 15:09	1
Molybdenum	**0.40**		0.0050	0.0011	mg/L		06/10/25 14:00	06/11/25 15:09	1
Selenium	ND		0.0050	0.00089	mg/L		06/10/25 14:00	06/11/25 15:09	1
Thallium	ND		0.0010	0.00051	mg/L		06/10/25 14:00	06/11/25 15:09	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/16/25 23:55	06/17/25 16:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**550**		10	10	mg/L			06/05/25 13:50	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.8**	**HF**	0.1	0.1	SU			06/04/25 14:03	1

Client Sample ID: WAP-3D-053025
Lab Sample ID: 180-191166-3

Date Collected: 05/30/25 15:55
Matrix: Water
Date Received: 06/03/25 09:05

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53**		1.0	0.71	mg/L			06/10/25 17:24	1
Fluoride	**0.28**		0.10	0.026	mg/L			06/10/25 17:24	1
Sulfate	**290**		5.0	3.8	mg/L			06/10/25 17:39	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**3.2**		0.050	0.012	mg/L		06/10/25 06:35	06/11/25 17:37	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/10/25 14:00	06/11/25 15:12	1
Arsenic	ND		0.0050	0.00075	mg/L		06/10/25 14:00	06/11/25 15:12	1
Barium	**0.018**		0.0050	0.00077	mg/L		06/10/25 14:00	06/11/25 15:12	1
Beryllium	ND		0.0010	0.00027	mg/L		06/10/25 14:00	06/11/25 15:12	1
Cadmium	**0.00016**	**J**	0.0010	0.000077	mg/L		06/10/25 14:00	06/11/25 15:12	1
Calcium	**140**		1.0	0.25	mg/L		06/10/25 14:00	06/11/25 15:12	1
Chromium	ND		0.0050	0.0012	mg/L		06/10/25 14:00	06/11/25 15:12	1
Cobalt	**0.0010**		0.0010	0.000086	mg/L		06/10/25 14:00	06/11/25 15:12	1
Lead	ND		0.0010	0.00045	mg/L		06/10/25 14:00	06/11/25 15:12	1
Lithium	**0.094**		0.0080	0.0034	mg/L		06/10/25 14:00	06/11/25 15:12	1
Molybdenum	**0.27**		0.0050	0.0011	mg/L		06/10/25 14:00	06/11/25 15:12	1
Selenium	ND		0.0050	0.00089	mg/L		06/10/25 14:00	06/11/25 15:12	1
Thallium	ND		0.0010	0.00051	mg/L		06/10/25 14:00	06/11/25 15:12	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/16/25 23:55	06/17/25 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**720**		10	10	mg/L			06/05/25 13:50	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.5**	**HF**	0.1	0.1	SU			06/05/25 11:10	1

Client Sample ID: WAP-7S-053025
Lab Sample ID: 180-191166-4

Date Collected: 05/30/25 13:45
Matrix: Water
Date Received: 06/03/25 09:05

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**73**		1.0	0.71	mg/L			06/10/25 17:53	1
Fluoride	**0.080**	**J**	0.10	0.026	mg/L			06/10/25 17:53	1
Sulfate	**370**		5.0	3.8	mg/L			06/10/25 18:37	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**11**		0.25	0.060	mg/L		06/10/25 06:35	06/11/25 17:59	5

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00097**	**J**	0.0020	0.00057	mg/L		06/10/25 14:00	06/11/25 15:14	1
Arsenic	**0.0062**		0.0050	0.00075	mg/L		06/10/25 14:00	06/11/25 15:14	1
Barium	**0.049**		0.0050	0.00077	mg/L		06/10/25 14:00	06/11/25 15:14	1
Beryllium	ND		0.0010	0.00027	mg/L		06/10/25 14:00	06/11/25 15:14	1
Cadmium	ND		0.0010	0.000077	mg/L		06/10/25 14:00	06/11/25 15:14	1
Calcium	**160**		1.0	0.25	mg/L		06/10/25 14:00	06/11/25 15:14	1
Chromium	ND		0.0050	0.0012	mg/L		06/10/25 14:00	06/11/25 15:14	1
Cobalt	ND		0.0010	0.000086	mg/L		06/10/25 14:00	06/11/25 15:14	1
Lead	ND		0.0010	0.00045	mg/L		06/10/25 14:00	06/11/25 15:14	1
Lithium	**0.20**		0.0080	0.0034	mg/L		06/10/25 14:00	06/11/25 15:14	1
Molybdenum	**0.24**		0.0050	0.0011	mg/L		06/10/25 14:00	06/11/25 15:14	1
Selenium	ND		0.0050	0.00089	mg/L		06/10/25 14:00	06/11/25 15:14	1
Thallium	ND		0.0010	0.00051	mg/L		06/10/25 14:00	06/11/25 15:14	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/16/25 23:55	06/17/25 16:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**770**		10	10	mg/L			06/05/25 13:50	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**9.5**	**HF**	0.1	0.1	SU			06/05/25 11:05	1

Client Sample ID: WAP-7D-053025
Lab Sample ID: 180-191166-5

Date Collected: 05/30/25 12:55
Matrix: Water
Date Received: 06/03/25 09:05

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**99**		1.0	0.71	mg/L			06/10/25 18:51	1
Fluoride	**0.33**		0.10	0.026	mg/L			06/10/25 18:51	1
Sulfate	**910**		10	7.6	mg/L			06/10/25 19:06	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**8.7**		0.25	0.060	mg/L		06/10/25 06:35	06/11/25 18:36	5

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/10/25 14:00	06/11/25 15:17	1
Arsenic	**0.0016**	**J**	0.0050	0.00075	mg/L		06/10/25 14:00	06/11/25 15:17	1
Barium	**0.028**		0.0050	0.00077	mg/L		06/10/25 14:00	06/11/25 15:17	1
Beryllium	ND		0.0010	0.00027	mg/L		06/10/25 14:00	06/11/25 15:17	1
Cadmium	ND		0.0010	0.000077	mg/L		06/10/25 14:00	06/11/25 15:17	1
Calcium	**320**		1.0	0.25	mg/L		06/10/25 14:00	06/11/25 15:17	1
Chromium	ND		0.0050	0.0012	mg/L		06/10/25 14:00	06/11/25 15:17	1
Cobalt	**0.0034**		0.0010	0.000086	mg/L		06/10/25 14:00	06/11/25 15:17	1
Lead	ND		0.0010	0.00045	mg/L		06/10/25 14:00	06/11/25 15:17	1
Lithium	**0.053**		0.0080	0.0034	mg/L		06/10/25 14:00	06/11/25 15:17	1
Molybdenum	**0.17**		0.0050	0.0011	mg/L		06/10/25 14:00	06/11/25 15:17	1
Selenium	ND		0.0050	0.00089	mg/L		06/10/25 14:00	06/11/25 15:17	1
Thallium	ND		0.0010	0.00051	mg/L		06/10/25 14:00	06/11/25 15:17	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/17/25 10:40	06/17/25 18:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1800**		10	10	mg/L			06/05/25 13:50	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.2**	**HF**	0.1	0.1	SU			06/05/25 11:00	1

Client Sample ID: WAP-8S-053025
Lab Sample ID: 180-191166-6

Date Collected: 05/30/25 18:00
Matrix: Water
Date Received: 06/03/25 09:05

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**60**		1.0	0.71	mg/L			06/10/25 19:20	1
Fluoride	**0.22**		0.10	0.026	mg/L			06/10/25 19:20	1
Sulfate	**180**		1.0	0.76	mg/L			06/10/25 19:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.4**		0.050	0.012	mg/L		06/10/25 06:35	06/11/25 17:47	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/10/25 14:00	06/11/25 15:19	1
Arsenic	**0.015**		0.0050	0.00075	mg/L		06/10/25 14:00	06/11/25 15:19	1
Barium	**0.091**		0.0050	0.00077	mg/L		06/10/25 14:00	06/11/25 15:19	1
Beryllium	ND		0.0010	0.00027	mg/L		06/10/25 14:00	06/11/25 15:19	1
Cadmium	ND		0.0010	0.000077	mg/L		06/10/25 14:00	06/11/25 15:19	1
Calcium	**94**		1.0	0.25	mg/L		06/10/25 14:00	06/11/25 15:19	1
Chromium	ND		0.0050	0.0012	mg/L		06/10/25 14:00	06/11/25 15:19	1
Cobalt	**0.0012**		0.0010	0.000086	mg/L		06/10/25 14:00	06/11/25 15:19	1
Lead	ND		0.0010	0.00045	mg/L		06/10/25 14:00	06/11/25 15:19	1
Lithium	**0.018**		0.0080	0.0034	mg/L		06/10/25 14:00	06/11/25 15:19	1
Molybdenum	**0.18**		0.0050	0.0011	mg/L		06/10/25 14:00	06/11/25 15:19	1
Selenium	ND		0.0050	0.00089	mg/L		06/10/25 14:00	06/11/25 15:19	1
Thallium	ND		0.0010	0.00051	mg/L		06/10/25 14:00	06/11/25 15:19	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/17/25 10:40	06/17/25 18:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**550**		10	10	mg/L			06/05/25 13:50	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**	**HF**	0.1	0.1	SU			06/05/25 11:19	1

Client Sample ID: WAP-8I-053025
Lab Sample ID: 180-191166-7

Date Collected: 05/30/25 17:15
Matrix: Water
Date Received: 06/03/25 09:05

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**28**		1.0	0.71	mg/L			06/10/25 19:49	1
Fluoride	**0.20**		0.10	0.026	mg/L			06/10/25 19:49	1
Sulfate	**64**		1.0	0.76	mg/L			06/10/25 19:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.11**		0.050	0.012	mg/L		06/10/25 06:35	06/11/25 17:50	1

Method: SW846 EPA 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/10/25 14:00	06/11/25 15:22	1
Arsenic	**0.0052**		0.0050	0.00075	mg/L		06/10/25 14:00	06/11/25 15:22	1
Barium	**0.062**		0.0050	0.00077	mg/L		06/10/25 14:00	06/11/25 15:22	1
Beryllium	ND		0.0010	0.00027	mg/L		06/10/25 14:00	06/11/25 15:22	1
Cadmium	ND		0.0010	0.000077	mg/L		06/10/25 14:00	06/11/25 15:22	1
Calcium	**43**		1.0	0.25	mg/L		06/10/25 14:00	06/11/25 15:22	1
Chromium	ND		0.0050	0.0012	mg/L		06/10/25 14:00	06/11/25 15:22	1
Cobalt	**0.00048**	**J**	0.0010	0.000086	mg/L		06/10/25 14:00	06/11/25 15:22	1
Lead	ND		0.0010	0.00045	mg/L		06/10/25 14:00	06/11/25 15:22	1
Lithium	ND		0.0080	0.0034	mg/L		06/10/25 14:00	06/11/25 15:22	1
Molybdenum	**0.021**		0.0050	0.0011	mg/L		06/10/25 14:00	06/11/25 15:22	1
Selenium	ND		0.0050	0.00089	mg/L		06/10/25 14:00	06/11/25 15:22	1
Thallium	ND		0.0010	0.00051	mg/L		06/10/25 14:00	06/11/25 15:22	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/16/25 23:55	06/17/25 16:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**260**		10	10	mg/L			06/05/25 13:50	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	**7.4**	**HF**	0.1	0.1	SU			06/05/25 11:14	1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-497463/6
Matrix: Water
Analysis Batch: 497463

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			06/10/25 10:32	1
Fluoride	ND		0.10	0.026	mg/L			06/10/25 10:32	1
Sulfate	ND		1.0	0.76	mg/L			06/10/25 10:32	1

Lab Sample ID: LCS 180-497463/7
Matrix: Water
Analysis Batch: 497463

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	47.7		mg/L		95	80 - 120
Fluoride	2.50	2.43		mg/L		97	80 - 120
Sulfate	50.0	47.5		mg/L		95	80 - 120

Method: EPA 6010D - Metals (ICP)

Lab Sample ID: MB 410-655156/1-A
Matrix: Water
Analysis Batch: 656382

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 655156

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.012	mg/L		06/10/25 06:35	06/11/25 16:57	1

Lab Sample ID: LCS 410-655156/2-A
Matrix: Water
Analysis Batch: 656382

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 655156

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.500	0.474		mg/L		95	83 - 119

Lab Sample ID: 180-191166-1 MS
Matrix: Water
Analysis Batch: 656382

Client Sample ID: WAP-2RR-053025
Prep Type: Total Recoverable
Prep Batch: 655156

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	2.5		0.500	2.91	4	mg/L		88	75 - 125

Lab Sample ID: 180-191166-1 MSD
Matrix: Water
Analysis Batch: 656382

Client Sample ID: WAP-2RR-053025
Prep Type: Total Recoverable
Prep Batch: 655156

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	2.5		0.500	2.91	4	mg/L		88	75 - 125	0	20

Lab Sample ID: 180-191166-1 DU
Matrix: Water
Analysis Batch: 656382

Client Sample ID: WAP-2RR-053025
Prep Type: Total Recoverable
Prep Batch: 655156

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	2.5		2.45		mg/L		0.8	20

Method: EPA 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-659210/1-A
Matrix: Water
Analysis Batch: 659511

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 659210

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		06/10/25 14:00	06/11/25 14:43	1
Arsenic	ND		0.0050	0.00075	mg/L		06/10/25 14:00	06/11/25 14:43	1
Barium	ND		0.0050	0.00077	mg/L		06/10/25 14:00	06/11/25 14:43	1
Beryllium	ND		0.0010	0.00027	mg/L		06/10/25 14:00	06/11/25 14:43	1
Cadmium	ND		0.0010	0.000077	mg/L		06/10/25 14:00	06/11/25 14:43	1
Calcium	ND		1.0	0.25	mg/L		06/10/25 14:00	06/11/25 14:43	1
Chromium	ND		0.0050	0.0012	mg/L		06/10/25 14:00	06/11/25 14:43	1
Cobalt	ND		0.0010	0.000086	mg/L		06/10/25 14:00	06/11/25 14:43	1
Lead	ND		0.0010	0.00045	mg/L		06/10/25 14:00	06/11/25 14:43	1
Lithium	ND		0.0080	0.0034	mg/L		06/10/25 14:00	06/11/25 14:43	1
Molybdenum	ND		0.0050	0.0011	mg/L		06/10/25 14:00	06/11/25 14:43	1
Selenium	ND		0.0050	0.00089	mg/L		06/10/25 14:00	06/11/25 14:43	1
Thallium	ND		0.0010	0.00051	mg/L		06/10/25 14:00	06/11/25 14:43	1

Lab Sample ID: LCS 240-659210/2-A
Matrix: Water
Analysis Batch: 659511

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 659210

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.100	0.100		mg/L		100	80 - 120
Arsenic	1.00	0.991		mg/L		99	80 - 120
Barium	1.00	0.989		mg/L		99	80 - 120
Beryllium	0.500	0.504		mg/L		101	80 - 120
Cadmium	0.500	0.496		mg/L		99	80 - 120
Calcium	25.0	25.5		mg/L		102	80 - 120
Chromium	0.500	0.508		mg/L		102	80 - 120
Cobalt	0.500	0.488		mg/L		98	80 - 120
Lead	0.500	0.537		mg/L		107	80 - 120
Lithium	0.500	0.532		mg/L		106	80 - 120
Molybdenum	0.500	0.501		mg/L		100	80 - 120
Selenium	1.00	0.976		mg/L		98	80 - 120
Thallium	1.00	1.15		mg/L		115	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 410-656666/1-A
Matrix: Water
Analysis Batch: 659095

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 656666

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/16/25 23:55	06/17/25 15:57	1

Lab Sample ID: LCS 410-656666/2-A
Matrix: Water
Analysis Batch: 659095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 656666

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00100	0.000949		mg/L		95	80 - 118

Method: EPA 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: MB 410-658634/1-A
Matrix: Water
Analysis Batch: 659095

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 658634

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.000087	mg/L		06/17/25 10:40	06/17/25 18:33	1

Lab Sample ID: LCS 410-658634/2-A
Matrix: Water
Analysis Batch: 659095

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 658634

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00100	0.00115		mg/L		115	80 - 118

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-497201/24
Matrix: Water
Analysis Batch: 497201

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: 180-191166-2 DU
Matrix: Water
Analysis Batch: 497201

Client Sample ID: WAP-3S-053025
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.8	HF	7.8		SU		0.3	2

Lab Sample ID: LCS 180-497222/1
Matrix: Water
Analysis Batch: 497222

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	99 - 101

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

Lab Sample ID: MB 180-497238/1
Matrix: Water
Analysis Batch: 497238

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		10	10	mg/L			06/05/25 13:50	1

Lab Sample ID: LCS 180-497238/2
Matrix: Water
Analysis Batch: 497238

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	176	156		mg/L		89	85 - 115

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

Lab Sample ID: 180-191166-6 DU
Matrix: Water
Analysis Batch: 497238

Client Sample ID: WAP-8S-053025
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	550			553		mg/L				0.7	10

HPLC/IC

Analysis Batch: 497463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-1	WAP-2RR-053025	Total/NA	Water	EPA 9056A	
180-191166-2	WAP-3S-053025	Total/NA	Water	EPA 9056A	
180-191166-3	WAP-3D-053025	Total/NA	Water	EPA 9056A	
180-191166-3	WAP-3D-053025	Total/NA	Water	EPA 9056A	
180-191166-4	WAP-7S-053025	Total/NA	Water	EPA 9056A	
180-191166-4	WAP-7S-053025	Total/NA	Water	EPA 9056A	
180-191166-5	WAP-7D-053025	Total/NA	Water	EPA 9056A	
180-191166-5	WAP-7D-053025	Total/NA	Water	EPA 9056A	
180-191166-6	WAP-8S-053025	Total/NA	Water	EPA 9056A	
180-191166-7	WAP-8I-053025	Total/NA	Water	EPA 9056A	
MB 180-497463/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-497463/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 655156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-1	WAP-2RR-053025	Total Recoverable	Water	3005A	
180-191166-2	WAP-3S-053025	Total Recoverable	Water	3005A	
180-191166-3	WAP-3D-053025	Total Recoverable	Water	3005A	
180-191166-4	WAP-7S-053025	Total Recoverable	Water	3005A	
180-191166-5	WAP-7D-053025	Total Recoverable	Water	3005A	
180-191166-6	WAP-8S-053025	Total Recoverable	Water	3005A	
180-191166-7	WAP-8I-053025	Total Recoverable	Water	3005A	
MB 410-655156/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-655156/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-191166-1 MS	WAP-2RR-053025	Total Recoverable	Water	3005A	
180-191166-1 MSD	WAP-2RR-053025	Total Recoverable	Water	3005A	
180-191166-1 DU	WAP-2RR-053025	Total Recoverable	Water	3005A	

Analysis Batch: 656382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-1	WAP-2RR-053025	Total Recoverable	Water	EPA 6010D	655156
180-191166-2	WAP-3S-053025	Total Recoverable	Water	EPA 6010D	655156
180-191166-3	WAP-3D-053025	Total Recoverable	Water	EPA 6010D	655156
180-191166-4	WAP-7S-053025	Total Recoverable	Water	EPA 6010D	655156
180-191166-5	WAP-7D-053025	Total Recoverable	Water	EPA 6010D	655156
180-191166-6	WAP-8S-053025	Total Recoverable	Water	EPA 6010D	655156
180-191166-7	WAP-8I-053025	Total Recoverable	Water	EPA 6010D	655156
MB 410-655156/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	655156
LCS 410-655156/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	655156
180-191166-1 MS	WAP-2RR-053025	Total Recoverable	Water	EPA 6010D	655156
180-191166-1 MSD	WAP-2RR-053025	Total Recoverable	Water	EPA 6010D	655156
180-191166-1 DU	WAP-2RR-053025	Total Recoverable	Water	EPA 6010D	655156

Prep Batch: 656666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-2	WAP-3S-053025	Total/NA	Water	7470A	
180-191166-3	WAP-3D-053025	Total/NA	Water	7470A	
180-191166-4	WAP-7S-053025	Total/NA	Water	7470A	
180-191166-7	WAP-8I-053025	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 656666 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-656666/1-A	Method Blank	Total/NA	Water	7470A	
LCS 410-656666/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 658634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-1	WAP-2RR-053025	Total/NA	Water	7470A	
180-191166-5	WAP-7D-053025	Total/NA	Water	7470A	
180-191166-6	WAP-8S-053025	Total/NA	Water	7470A	
MB 410-658634/1-A	Method Blank	Total/NA	Water	7470A	
LCS 410-658634/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 659095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-1	WAP-2RR-053025	Total/NA	Water	EPA 7470A	658634
180-191166-2	WAP-3S-053025	Total/NA	Water	EPA 7470A	656666
180-191166-3	WAP-3D-053025	Total/NA	Water	EPA 7470A	656666
180-191166-4	WAP-7S-053025	Total/NA	Water	EPA 7470A	656666
180-191166-5	WAP-7D-053025	Total/NA	Water	EPA 7470A	658634
180-191166-6	WAP-8S-053025	Total/NA	Water	EPA 7470A	658634
180-191166-7	WAP-8I-053025	Total/NA	Water	EPA 7470A	656666
MB 410-656666/1-A	Method Blank	Total/NA	Water	EPA 7470A	656666
MB 410-658634/1-A	Method Blank	Total/NA	Water	EPA 7470A	658634
LCS 410-656666/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	656666
LCS 410-658634/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	658634

Prep Batch: 659210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-1	WAP-2RR-053025	Total Recoverable	Water	3005A	
180-191166-2	WAP-3S-053025	Total Recoverable	Water	3005A	
180-191166-3	WAP-3D-053025	Total Recoverable	Water	3005A	
180-191166-4	WAP-7S-053025	Total Recoverable	Water	3005A	
180-191166-5	WAP-7D-053025	Total Recoverable	Water	3005A	
180-191166-6	WAP-8S-053025	Total Recoverable	Water	3005A	
180-191166-7	WAP-8I-053025	Total Recoverable	Water	3005A	
MB 240-659210/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-659210/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 659511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-1	WAP-2RR-053025	Total Recoverable	Water	EPA 6020B	659210
180-191166-2	WAP-3S-053025	Total Recoverable	Water	EPA 6020B	659210
180-191166-3	WAP-3D-053025	Total Recoverable	Water	EPA 6020B	659210
180-191166-4	WAP-7S-053025	Total Recoverable	Water	EPA 6020B	659210
180-191166-5	WAP-7D-053025	Total Recoverable	Water	EPA 6020B	659210
180-191166-6	WAP-8S-053025	Total Recoverable	Water	EPA 6020B	659210
180-191166-7	WAP-8I-053025	Total Recoverable	Water	EPA 6020B	659210
MB 240-659210/1-A	Method Blank	Total Recoverable	Water	EPA 6020B	659210
LCS 240-659210/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020B	659210

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: CCR Groundwater Monitoring FB Culley West

Job ID: 180-191166-2
SDG: FB Culley West

General Chemistry

Analysis Batch: 497201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-2	WAP-3S-053025	Total/NA	Water	EPA 9040C	
LCS 180-497201/24	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-191166-2 DU	WAP-3S-053025	Total/NA	Water	EPA 9040C	

Analysis Batch: 497222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-1	WAP-2RR-053025	Total/NA	Water	EPA 9040C	
180-191166-3	WAP-3D-053025	Total/NA	Water	EPA 9040C	
180-191166-4	WAP-7S-053025	Total/NA	Water	EPA 9040C	
180-191166-5	WAP-7D-053025	Total/NA	Water	EPA 9040C	
180-191166-6	WAP-8S-053025	Total/NA	Water	EPA 9040C	
180-191166-7	WAP-8I-053025	Total/NA	Water	EPA 9040C	
LCS 180-497222/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 497238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-191166-1	WAP-2RR-053025	Total/NA	Water	SM 2540C	
180-191166-2	WAP-3S-053025	Total/NA	Water	SM 2540C	
180-191166-3	WAP-3D-053025	Total/NA	Water	SM 2540C	
180-191166-4	WAP-7S-053025	Total/NA	Water	SM 2540C	
180-191166-5	WAP-7D-053025	Total/NA	Water	SM 2540C	
180-191166-6	WAP-8S-053025	Total/NA	Water	SM 2540C	
180-191166-7	WAP-8I-053025	Total/NA	Water	SM 2540C	
MB 180-497238/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-497238/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-191166-6 DU	WAP-8S-053025	Total/NA	Water	SM 2540C	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Francis Reed	Lab PM: Johnson, Andy	Carrier Tracking No(s):	COC No: 180-114068-14503 1
Client Contact: Britton Hundley	Phone: 614-288-8619	E-Mail: Andy Johnson@et.eurofinsus com	State of Origin: IN	Page: Page 1 of 1
Company: Haley & Aldrich, Inc	PWSID:	Analysis Requested		Job #: 0129420-032
Address: 400 Augusta Street Suite 100	Due Date Requested:			Preservation Codes: N - None D - HNO3
City: Greenville	TAT Requested (days): STD			
State, Zip: SC, 29601	Compliance Project: Δ Yes Δ No			
Phone	PO #: 0129420-032-001-02			
Email: BHundley@haleyaldrich.com	WO #: See Chain			Other:
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014			
Site	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air, DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS by 2540C	9315_Ra226, 9320_Ra228	6020B - Metals by 6020B	7470A - Hg by 7470A	6010D - Boron by 6010D	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D	D	D		
WAP-2RR -053025	05/30/25	11:50	G	Water	N	N	X	X	X	X	X	X	6	
WAP-3S -053025		15:05	G	Water	N	N	X	X	X	X	X	X	6	
WAP-3D -053025		15:55	G	Water	N	N	X	X	X	X	X	X	6	
WAP-7S -053025		13:45	G	Water	N	N	X	X	X	X	X	X	6	
WAP-7D -053025		12:55	G	Water	N	N	X	X	X	X	X	X	6	
WAP-8S -053025		18:00	G	Water	N	N	X	X	X	X	X	X	6	
WAP-8I -053025		17:15	G	Water	N	N	X	X	X	X	X	X	6	

180-191166 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Francis Reed	6/2/25 10:00	H&A		6/3/25 0905	EPHMS
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
	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

Ver: 10/10/2024

ORIGIN ID:AGCA (17) 579-4082
N CORPORATION
(OA)
371
NEWBURGH,
UNITED STATE
30
S

SHIP DATE: 21MAY25
ACTWGT: 30.00 LB MAN
CAD: 0522321/CAFE3907

Part # 159469-434 MTW EXP 11/25

TO SAMPLE RECEIVING DEPARTMENT
EUROFINS ENVIRO. TESTING PITT N.E.
301 ALPHA DRIVE

PITTSBURGH PA 15238
(412) 963-7530
REF: RETURN

RMA:

Uncorrected temp 3.8 °C
Thermometer ID #26-09
CF -0.9 Initials

FedEx Express

P 03/26 PT-WI-SR-001 effective 7/26/13

Corrected temp °C

TRK# 0221 4359 6084 0505

65 AGCA

TUE - 03 JUN 10:30A
PRIORITY OVERNIGHT

15238
PA-US PIT

180-191166 Waybill

1BGJ4557259F2

ORIGIN ID:AGCA (317) 579-4082
LINDSEY GISH
FB CULLEY VECTREN CORPORATION
3711 DARLINGTON ROAD

NEWBURGH, IN 47630
UNITED STATES US

SHIP DATE: 21MAY25
ACTWGT: 30.00 LB MAN
CAD: 0522321/CAFE3907

Part # 159469-434 MTW EXP 11/25
58CC4/E836/FE2D

TO **SAMPLE RECEIVING DEPARTMENT**
EUROFINS ENVIRO. TESTING PITT N.E.
301 ALPHA DRIVE

PITTSBURGH PA 15238
(412) 963-7530
REF: RETURN

RMA:

Uncorrected temp 5.1 °C
Thermometer ID #20
CF -0.9 Initials fh
PT-WI-SR-001 effective 7/26/13

FedEx Express

2411140101

Uncorrected temp °C

TRK#

TUE - 03 JUN 10:30A
PRIORITY OVERNIGHT

15238
PIT

PA-US

FedEx
TRK# 0221

4359 6084 0516

65 AGCA

59GJ4557259F2

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Johnson, Andy	Carrier Tracking No(s): N/A	COC No: 180-539887 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Andy.Johnson@et.eurofinsus.com	State of Origin: Indiana	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): N/A		Job #: 180-191166-2
Address: 180 S. Van Buren Avenue,	Due Date Requested: 6/16/2025			Preservation Codes:
City: Barberton	TAT Requested (days): N/A			
State, Zip: OH, 44203				
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: CCR Groundwater Monitoring FB Culley West	Project #: 18016014			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3005A (MOD) CCR Metals by 6020B	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
WAP-2RR-053025 (180-191166-1)	5/30/25	11:50 Eastern	G	Water			X	1	
WAP-3S-053025 (180-191166-2)	5/30/25	15:05 Eastern	G	Water			X	1	
WAP-3D-053025 (180-191166-3)	5/30/25	15:55 Eastern	G	Water			X	1	
WAP-7S-053025 (180-191166-4)	5/30/25	13:45 Eastern	G	Water			X	1	
WAP-7D-053025 (180-191166-5)	5/30/25	12:55 Eastern	G	Water			X	1	
WAP-8S-053025 (180-191166-6)	5/30/25	18:00 Eastern	G	Water			X	1	
WAP-8I-053025 (180-191166-7)	5/30/25	17:15 Eastern	G	Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 6/6/25 1700	Company: EHA	Received by: MALISSA LOAR
Relinquished by:	Date/Time:	Company	Received by:
Relinquished by:	Date/Time:	Company	Received by:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Date/Time: 6-7-25 9:38 Company

Eurofins – Cleveland Sample Receipt Form/Narrative Login # _____
Barberton Facility

Client ECK Pittsburgh Site Name _____ Cooler unpacked by:

Cooler Received on 6-7-25 Opened on 6-9-25 MALISSA LOAR

FedEx. 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 9C Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 17 (CF 1.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	No
4 Did custody papers accompany the sample(s)?	Yes	No
5 Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7 Did all bottles arrive in good condition (Unbroken)?	Yes	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	Yes	No
11 Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA	pH Strip Lot# HC463162
14 Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes No NA	
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17 Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18 CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Labeled by:

Labels Verified by

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation Date/Time VOAs Frozen _____

Login # _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 17	3.2	3.4	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	3.4	3.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	2.0	2.2	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	

Eurofins Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

180-191166 Chain of Custody

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM:	Carrier Tracking No(s): N/A
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail:	State of Origin:

Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): NELAP - Pennsylvania	Job #:
Address: 2425 New Holland Pike, ,	Due Date Requested:	Analysis Requested	Preservation Codes: -
City: Lancaster	TAT Requested (days): N/A		
State, Zip: PA, 17601			
Phone: 717-656-2300(Tel)	PO #:		
Email: N/A	WO #:		
Project Name:	Project #:		
Site:	SSOW#:		Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wwater, Sesolid, Owwaste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D Boron	7470A - Hg	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
180-191166-1	5/30/25	1150					X	X	2	
180-191166-2		1505					X	X	2	
180-191166-3		1555					X	X	2	
180-191166-4		1345					X	X	2	
180-191166-5		1255					X	X	2	
180-191166-6		1800					X	X	2	
180-191166-7		1715					X	X	2	
									1	
									1	

Note: Since laboratory accreditations are subject to change, Eurofins Pittsburgh 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Pittsburgh.

Possible Hazard Identification Unconfirmed	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)* ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		6/5/25 1400	EHTHE		6/5/25 1415	ELLE
2		6/5/25 1845	ELLE			
3					6/5/25 1845	ELLE

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: R2.5-C2.4

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-191166-2
SDG Number: FB Culley West

Login Number: 191166
List Number: 1
Creator: Abernathy, Eric L

List Source: Eurofins Pittsburgh

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.	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?	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.	True	
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	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-191166-2
SDG Number: FB Culley West

Login Number: 191166
List Number: 2
Creator: Ballard, Megan

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 06/05/25 12:17 PM

Question	Answer	Comment
The cooler's custody seal is 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 acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.