

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

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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 2022/2023.

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 7 February 2020 for the former WAP to meet the requirements of 40 CFR § 257.95. The former WAP remained in assessment monitoring during 2022 and 2023.

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 groundwater analytical results was completed in accordance with 40 CFR § 257.93(h)(2). Analysis of the May 2022 analytical results was completed in September 2022 and 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.

Statistical analysis of the November 2022 groundwater analytical results was completed in January 2023 and 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 30 October 2020.

1.1.4.3 40 CFR § 257.90(e)(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 inform the selection of remedy and are in progress.

1.1.4.4 40 CFR \S 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 26 February 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 2023 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 2023; 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 17 December 2015.

However, on 5 August 2016, the United States Environmental Protection Agency issued a "Direct Final Rule," effective on 4 October 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 1 August 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 1 August 2023 due to the partial vacatur ordered by the District of Columbia Circuit Court on 14 June 2016 and the subsequent Direct Final Rule effective 4 October 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. Field forms pertaining to November 2022 and May 2023 sampling events are included in Appendix B and laboratory analytical reports are included in Appendix C.

1.3.1 Status of the Groundwater Monitoring Program

As provided in the notification on 12 July 2019, statistically significant increases (SSIs) 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 2 July 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). Semiannual assessment monitoring is ongoing. 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.



1.3.2 Key Actions Completed

The following key actions were completed during the 2022/2023 reporting period (from 1 July 2022 through 30 June 2023):

- Statistical analysis of assessment monitoring results for the May 2022 groundwater monitoring event was completed on 29 September 2022 to evaluate the potential for SSLs of Appendix IV constituents in groundwater downgradient of the former WAP (Appendix A).
- Statistical analysis of assessment monitoring results for the November 2022 groundwater monitoring event was completed on 22 March 2023 to evaluate potential for SSLs of Appendix IV constituents in groundwater downgradient of the former WAP (Appendix A).
- Preparation of the 2021/2022 Annual Report which included the following activities:
 - The 2021/2022 Annual Report was placed in the facility's Operating Record pursuant to 40 CFR § 257.105(h)(1);
 - 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 2021/2022 Annual Report being placed in the facility's Operating Record [§ 257.106(d)]; and
 - Pursuant to 40 CFR § 257.107(h)(1), the 2021/2022 Annual Report was posted to the CCR Website within 30 days of the 2021/2022 Annual Report being placed in the facility's Operating Record [§ 257.107(d)] and 257.107(h)(1)].
- Collected and analyzed assessment monitoring groundwater samples in accordance with 40 CFR § 257.95(b) and § 257.95(d)(1). Groundwater elevations were measured during each sampling event in accordance with 40 CFR § 257.93(c). Groundwater configuration maps showing the direction of groundwater flow and the groundwater flow rates are provided as Figures 2 and 3.
- Continued evaluation of the nature and extent of Appendix IV SSLs as required by 40 CFR §
 257.95(g)(1).
- Developed a Surface Water Sampling Work Plan (Work Plan) to further evaluate the nature and extent of affected groundwater downgradient from the former WAP. The Work Plan was submitted to IDEM for review and approval.

1.3.3 Problems Encountered

No problems were encountered during the 2022/2023 reporting period.

1.3.4 Actions to Resolve Problems

No actions were taken as there were no problems encountered during the 2022/2023 reporting period.

1.3.5 Project Key Activities for Upcoming Year

Key activities planned to be completed through June 2024 include the following:

- Further define the nature and extent of lithium and molybdenum in groundwater downgradient of the former WAP.
- 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 are presented as Figure 1. A groundwater flow map for the November 2022 sampling event is included on Figure 2 and for the May 2023 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 is provided for reference in Table I.

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 § 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 II, III, and IV of this report. Table II summarizes the assessment monitoring results for the original CCR monitoring network. Table III provides the results obtained to characterize the nature and extent of Appendix IV SSLs, and Table IV includes the state-required baseline and detection sampling results at monitoring locations required by IDEM. Laboratory analytical data reports and field sampling forms are provided in Appendix B 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 in September 2022 for the May 2022 sampling event and in March 2023 for the November 2022 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.

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TABLES

GROUNDWATER MONITORING WELL LOCATION AND CONSTRUCTION DETAILS

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

Well	Easting	Northing	Top of Pad Elevation (ft msl)	Top of Casing Elevation (ft msl)	Surface Grout (ft bgs)	Bentonite (ft bgs)	Sand Pack (ft bgs)	Screen Zone (ft bgs)	Screen Length (ft)	Well Radius (in)
Upgradient We	ells									
WAP-1	2882824.18	971214.17	403.77	403.39	0 - 22	22 - 24	24 - 36	26 - 36	10	2
CCR-AP-7	2883090.34	970774.64	429.50	434.11	0 - 16	16 - 18	18 - 30	20 - 30	10	2
Downgradient	Wells									
(CCR Monitoria	ng Network)									
WAP-2RR	2881499.20	971367.50	391.70	391.74	0 - 42	42 - 44	44 - 56	46 - 56	10	2
WAP-3S	2881252.80	970978.10	388.20	388.47	0 - 55	55 - 57	57 - 70	60 - 70	10	2
WAP-4S	2881333.40	970405.60	384.60	384.61	0 - 31	31 - 33	33 - 45	35 - 45	10	2
WAP-5S	2881521.50	970236.00	384.60	384.68	0 - 26	26 - 28	28 - 40	30 - 40	10	2
(Assessment o	f Nature & Exte	ent)								
WAP-3D	2881253.20	970975.00	388.20	388.41	0 - 65.5	65.5 - 68	68 - 82.5	72.5 - 82.5	10	2
WAP-4I	2881329.10	970409.20	384.50	384.58	0 - 61	61- 63	63 - 75	65 - 75	10	2
WAP-4D	2881325.40	970412.50	384.50	384.48	0 - 102	102 - 104	104 - 116	106 - 116	10	2
WAP-5I	2881525.00	970232.80	384.70	384.71	0 - 61	61 - 63	63 - 75	65 - 75	10	2
WAP-5D	2881528.80	970229.90	384.60	384.71	0 - 99	99 - 101	101 - 113	103 - 113	10	2
WAP-9S	2881063.86	970693.11	393.00	392.69	0 - 51	51 - 53	53 - 65	55 - 65	10	2
WAP-9I	2881066.94	970697.89	393.20	392.88	0 - 76	76 - 78	78 - 90	80 - 90	10	2
WAP-9D	2881069.75	970701.94	393.10	392.74	0 - 112.5	112.5 - 114.5	114.5 - 126.5	116.5 - 126.5	10	2
(IDEM Approva	al of Closure/Po	ost-Closure P	lan)							
WAP-6S	2881090.90	970688.30	385.90	385.95	0 - 36	36 - 38	38 - 50	40 - 50	10	2
WAP-6I	2881088.20	970683.30	386.10	386.11	0 - 65.5	65.5 - 67.5	67.5 - 80	70 - 80	10	2
WAP-6D	2881092.60	970693.10	386.00	386.06	0 - 101	101 - 103	103 - 115.5	105.5 - 115.5	10	2
WAP-7S	2881363.50	971158.10	389.40	389.55	0 - 45	45 - 47	47 - 60	50 - 60	10	2
WAP-7D	2881365.20	971161.50	389.20	389.25	0 - 64	64 - 66	66 - 78.5	68.5 - 78.5	10	2
WAP-8S	2881317.80	970630.00	384.80	384.90	0 - 35	35 - 37.5	37.5 - 50	40 - 50	10	2
WAP-8I	2881313.40	970633.60	384.70	384.78	0 - 65.5	65.5 - 67.5	67.5 - 80	70 - 80	10	2
WAP-8D	2881309.50	970636.70	384.70	384.72	0 - 92.5	92.5 - 94.5	94.5 - 107	97 - 107	10	2

Notes:

bgs = below ground surface

ft = feet

in = inches

msl = mean sea level

SUMMARY OF GROUNDWATER QUALITY DATA FROM THE ORIGINAL CCR MONITORING NETWORK

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

WARRICK COUNTY, INDIANA

Location Group	Action Level		Up-Grad	ient					West Ash	n Pond			
Location Name	:	CCR-AP-7	CCR-AP-7	WAP-1	WAP-1	WAP-2RR	WAP-2RR	WAP-3S	WAP-3S	WAP-4S	WAP-4S	WAP-5S	WAP-5S
Sample Name	GWPS	CCR-AP-7-20221122	CCR-AP-7-20230522	WAP-1-20221121	WAP-1-20230518	WAP-2RR-20221121	WAP 2R-20230522	WAP-3S-20221121	WAP-3S-20230519	WAP-4S-20221116	WAP-4S-20230518	WAP-5S-20221116	WAP-5S-20230516
Sample Date	e GWF3	11/22/2022	05/22/2023	11/21/2022	05/18/2023	11/21/2022	05/22/2023	11/21/2022	05/19/2023	11/16/2022	05/18/2023	11/16/2022	05/16/2023
Lab Sample II)	180-148407-25	180-157134-1	180-148407-1	180-156913-7	180-148407-2	180-157134-4	180-148407-3	180-156913-9	180-148407-5	180-156913-8	180-148407-8	180-156881-1
Detection Monitoring - EPA Appendix III Constituents (mg/L)													
Boron, Total	4	0.049 J-	0.1 U	0.016 J-	0.2 U	5.2	3.5	4.2	5.4	13	15	4.8	5.9
Calcium, Total	NA	110	120	160	180	110	120	110	190	270	290	190	240
Chloride	NA	30	35	36	49	48	44	47	100	150	140	130	110
Fluoride	4	0.48	0.49	1.2	0.66	0.35	0.29	0.64	0.29	0.26	0.23	0.13	0.12
pH (lab) (pH units)	NA	7.7 J	7.3 J	7.4 J	7.4 J	7.1 J	7.2 J	7.6 J	7.7 J	8.8 J	7.4 J	7.2 J	7 J
Sulfate	NA	76	110	230	260	170	120	240	380	490	450	430	480
Total Dissolved Solids (TDS)	NA	580	590	710	820	650	510	620	860	1300	1200	1200	1200 J
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)													
Antimony, Total	0.006	0.002 U	0.002 U	0.00084 J	0.002 U	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	0.004 J	0.004 J	0.0039 J	0.0048	0.0012 J	0.0011 J	0.005 U	0.00062 J	0.012	0.027	0.005 U	0.00055 J
Barium, Total	2	0.1	0.11	0.41	0.46	0.033	0.043 J+	0.037	0.068	0.052	0.069	0.037	0.037 J+
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
Cadmium, Total	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.0003 J	0.00037 J	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	0.0036 J	0.0056 J+	0.005 U	0.005 U	0.005 U	0.002 U	0.005 U	0.002 U	0.005 U	0.002 U
Cobalt, Total	0.019	0.00087 J	0.00039 J	0.0011	0.0015	0.0022	0.002	0.00085 J	0.0011	0.0017	0.0017	0.0062	0.0037
Lead, Total	0.035	0.00082 J	0.001 U	0.0027	0.0043 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
Lithium, Total	0.04	0.007 J	0.01	0.0047 J	0.0074	0.018	0.025	0.088	0.12	0.008 U	0.0019 J	0.008 U	0.0024 J
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
Molybdenum, Total	0.1	0.0014 J	0.0018 J	0.005 U	0.00076 J	0.07	0.077	0.54	0.52	0.46	0.58	0.005 U	0.005 U
Selenium, Total	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.0059	0.0071	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
Radiological (pCi/L)													
Radium-226	NA	0.25 ± 0.133	0.269 ± 0.12	0.596 ± 0.258	0.437 ± 0.224	0.191 ± 0.105	1 U ± 0.104	0.332 ± 0.121	0.36 ± 0.175	0.112 U ± 0.0826	0.211 ± 0.144	0.0193 U ± 0.0553	1 U ± 0.0636
Radium-228	NA	1.08 U ± 0.543	1 U ± 0.452	1.63 ± 0.905	1 U ± 0.597	0.83 ± 0.401	1 U ± 0.401	0.901 ± 0.419	1 U ± 0.338	0.972 ± 0.423	1 U ± 0.344	1.47 ± 0.49	0.762 ± 0.421
Radium-226 & 228	NA	1.33 U ± 0.559	0.764 J ± 0.468	2.22 ± 0.941	1.26 J ± 0.638	1.02 ± 0.415	0.669 ± 0.414	1.23 ± 0.436	5 UJ ± 0.381	1.08 J ± 0.431	5 UJ ± 0.373	1.49 J ± 0.493	0.801 J ± 0.426
Field Parameters													
Temperature (Deg C)	NA	14.34	19.01	-	-	16.13	18.35	15.44	18.21	15.48	18.57	16.51	18.19
Dissolved Oxygen, Field (mg/L)	NA	0.68	0.42	-	-	0.19	0.3	0.72	0.35	0.12	0.21	0.37	0.38
Conductivity, Field (mS/cm)	NA	0.661	0.92607	-	-	0.688	0.82933	0.638	1.2106	1.228	1.5748	1.184	1.4114
Oxidation Reduction Potential (ORP), Field (mv)	NA	-48	-74.8	-	-	96.6	102.6	-7.5	-48.5	-21.8	-36.3	35.9	200.7
Turbidity, Field (NTU)	NA	18.2	1.08	-	-	1.29	0.39	0	1.42	37	206.61	0	0
pH, Field (pH units)	NA	7.1	7.13	-	-	6.52	6.63	7.59	7.57	6.99	7.09	6.49	6.54

Abbreviations and Notes:

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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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https://www.epa.gov/coalash/coal-ash-rule

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Upper Tolerance Limit.

HALEY & ALDRICH, INC.
2023-0727_HAI-FB Culley WAP Table II_orig Nov22-May23_F.xlsx
JULY 2023

SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS INSTALLED TO ASSESS THE NATURE AND EXTENT OF APPENDIX IV

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

WARRICK COUNTY, INDIANA

Location Gro	p Action Level										West Ash Pond					
Location Nan	ne	WAP-3D	WAP-3D	WAP-3D	WAP-3D	WAP-4I	WAP-4I	WAP-4D	WAP-4D	WAP-5I	WAP-5I	WAP-5D	WAP-5D	WAP-9S	WAP-9S	WAP-9I
Sample Nan	ne GWPS	WAP-3D-20221121	BLIND DUP 1-20221121	WAP-3D-20230519	DUP 2-20230519	WAP-4I-20221116	WAP-4I-20230517	WAP-4D-20221117	WAP-4D-20230517	WAP-5I-20221116	WAP-5I-20230516	WAP-5D-20221116	WAP-5D-20230516	WAP-9S-20221118	WAP-9S-20230519	WAP-9I-20221122
Sample Da	te	11/21/2022	11/21/2022	05/19/2023	05/19/2023	11/16/2022	05/17/2023	11/17/2022	05/17/2023	11/16/2022	05/16/2023	11/16/2022	05/16/2023	11/18/2022	05/19/2023	11/22/2022
Lab Sample	ID	180-148407-4	180-148407-23	180-156913-10	180-156913-11	180-148407-6	180-156881-8	180-148407-7	180-156881-7	180-148407-10	180-156881-2	180-148407-9	180-156881-3	180-148407-19	180-156913-1	180-148407-20
Detection Monitoring - EPA Appendix III Constituents (mg/L)																
Boron, Total	4	5	4.9	5.4	5.6	0.071	0.027 J	0.035	0.044 J	0.068	0.036 J	0.039	0.045 J	1.1	1	0.13
Calcium, Total	NA	170	170	190	230	41	32	47	52	40	35	47	50	69	75	45
Chloride	NA	57	58	83	83	21	18	22	24	20	19	22	24	24	25	20
Fluoride	4	0.39	0.3	0.19	0.2	0.15	0.14	0.15	0.16	0.15	0.14	0.14	0.15	0.79	0.34	0.14
pH (lab) (pH units)	NA	7.8 J	7.9 J	7.7 J	7.7 J	7.7 J	7.7 J	7.9 J	7.8 J	7.7 J	7.7 J	7.7 J	7.6 J	8 J	7.8 J	8 J
Sulfate	NA	380	380	490	490	49	40	31	33	48	42	42	46	40	64	41
Total Dissolved Solids (TDS)	NA	870	860	1100	1000 J	230	170	240	230	230	200	230	240	610	350	240
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	0.002 U
Arsenic, Total	0.025	0.005 U	0.005 U	0.00032 J	0.00033 J	0.0069	0.017	0.0078	0.0098	0.061	0.0046	0.01	0.0099	0.0024 J	0.00088 J	0.006
Barium, Total	2	0.021	0.021	0.024 J+	0.028 J+	0.17	0.14	0.25	0.3	0.13	0.093	0.19	0.22	0.1	0.088	0.1
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	0.001 U
Cadmium, Total	0.005	0.001 U	0.001 U	0.00037 J	0.00059 J	0.001 U	0.00022 J	0.001 U	0.00028 J	0.001 U	0.001 U					
Chromium, Total	0.1	0.005 U	0.005 U	0.002 U	0.002 U	0.005 U	0.002 U	0.005 U	0.002 U	0.005 U	0.002 U	0.005 U	0.002 U	0.0056	0.002 U	0.005 U
Cobalt, Total	0.019	0.0013	0.0013	0.0012	0.0015	0.00043 J	0.0005	0.001 U	0.0005 U	0.00066 J	0.0005 U	0.001 U	0.0005 U	0.0026	0.00046 J	0.00028 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	0.00085 J	0.001 U	0.001 U	0.001 U	0.0025	0.001 U	0.001 U
Lithium, Total	0.04	0.079	0.079	0.1	0.11	0.0028 J	0.0029 J	0.008 U	0.0023 J	0.0019 J	0.0031 J	0.008 U	0.0017 J	0.0091	0.008	0.0017 J
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	0.0002 U
Molybdenum, Total	0.1	0.28	0.29	0.26	0.31	0.0018 J	0.0018 J	0.0049 J	0.005	0.0016 J	0.0016 J	0.0034 J	0.0039 J	0.13	0.11	0.013
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	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	0.001 U	0.001 U
Radiological (pCi/L)																
Radium-226	NA	0.116 U ± 0.0842	0.152 ± 0.0872	0.267 ± 0.139	1 U ± 0.128	0.324 ± 0.13	0.264 ± 0.138	0.391 ± 0.129	0.385 ± 0.157	0.304 ± 0.126	1 U ± 0.0858	0.335 ± 0.116	0.286 ± 0.179	0.245 U ± 0.201	1 U ± 0.134	0.135 U ± 0.099
Radium-228	NA	0.446 U ± 0.347	0.826 U ± 0.413	1 U ± 0.314	1 U ± 0.343	1.05 ± 0.425	0.722 ± 0.491	0.903 ± 0.382	1 U ± 0.494	0.905 ± 0.444	1 U ± 0.319	1.9 ± 0.523	1 U ± 0.352	1.01 U ± 0.778	1 U ± 0.365	0.41 U ± 0.327
Radium-226 & 228	NA	0.562 ± 0.357	0.978 U ± 0.422	5 UJ ± 0.343	5 U ± 0.366	1.38 ± 0.444	0.986 ± 0.51	1.29 ± 0.403	1.01 J ± 0.518	1.21 ± 0.462	5 U ± 0.33	2.24 ± 0.536	5 UJ ± 0.395	1.26 ± 0.804	5 U ± 0.389	0.545 ± 0.342
Field Parameters																
Temperature (Deg C)	NA	10.06	10.06	18.49	18.49	17.15	15.67	7.25	17.8	17	16.76	17.69	17.08	10.7	18.78	17.36
Dissolved Oxygen, Field (mg/L)	NA	2	2	0.28	0.28	0.25	0.19	1.57	0.29	0.25	0.19	0.25	0.21	1.14	4.42	0.19
Conductivity, Field (mS/cm)	NA	0.816	0.816	1.3852	1.3852	0.269	0.29144	0.285	0.38385	0.269	0.30426	0.275	0.39146	0.393	0.55247	0.285
Oxidation Reduction Potential (ORP), Field (mv)	NA	39	39	-144.5	-144.5	10.4	-34.2	-60	-134.7	1.5	-23.2	-69.3	-87.3	12	-29.8	-62.3
Turbidity, Field (NTU)	NA	0	0	0.61	0.61	0.01	9.42	0	0	24.66	11.38	3.64	0	182	7.64	0
pH, Field (pH units)	NA	7.46	7.46	7.5	7.5	7	7.51	7.46	7.6	7.03	7.33	7.12	7.24	7.36	7.6	7.44

Abbreviations and Notes:

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mg/L: milligram per liter.

mS/cm: millSiemen per centimeter. mv: millivolts.

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HALEY & ALDRICH, INC. JULY 2023 2023-0727-HAI-FB Culley WAP Table III_N+E Nov22-May23_F.xlsx

SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS INSTALLED TO ASSESS THE NATURE AND EXTENT OF APPENDIX IV

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

WARRICK COUNTY, INDIANA

Location Group	Action Level				
Location Name		WAP-9I	WAP-9I	WAP-9D	WAP-9D
Sample Name	GWPS	BLIND DUP 2-20221122	WAP-9I-20230519	WAP-9D-20221122	WAP-9D-20230519
Sample Date	GWF3	11/22/2022	05/19/2023	11/22/2022	05/19/2023
Lab Sample ID		180-148407-24	180-156913-2	180-148407-21	180-156913-3
Detection Monitoring - EPA Appendix III Constituents (mg/L)					
Boron, Total	4	0.13	0.2 U	0.15	0.24
Calcium, Total	NA	45	36	36	22
Chloride	NA	20	20	19	13
Fluoride	4	0.14	0.12	0.31	7.6
pH (lab) (pH units)	NA	8 J	7.8 J	7.8 J	6.6 J
Sulfate	NA	42	39	39	24
Total Dissolved Solids (TDS)	NA	240	190	290	180
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)					
Antimony, Total	0.006	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	0.0059	0.0052	0.0086	0.015
Barium, Total	2	0.1	0.085	0.17	0.12
Beryllium, Total	0.004	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
Chromium, Total	0.1	0.005 U	0.002 U	0.0048 J	0.0026 U
Cobalt, Total	0.019	0.00026 J	0.0005 U	0.0018	0.0019
Lead, Total	0.035	0.001 U	0.001 U	0.002	0.0013 U
Lithium, Total	0.04	0.0017 J	0.0037 J	0.0047 J	0.0053
Mercury, Total	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	0.013	0.0099	0.0086	0.014
Selenium, Total	0.05	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
Radiological (pCi/L)					
Radium-226	NA	0.123 U ± 0.088	1 U ± 0.116	0.456 ± 0.257	0.631 ± 0.333
Radium-228	NA	0.241 U ± 0.316	1 U ± 0.474	1.1 U ± 0.983	1 U ± 0.732
Radium-226 & 228	NA	0.364 U ± 0.328	5 U ± 0.488	1.56 J ± 1.02	5 UJ ± 0.804
Field Parameters	_				
Temperature (Deg C)	NA	17.36	19.34	15.71	19.87
Dissolved Oxygen, Field (mg/L)	NA	0.19	1.04	1.24	6.16
Conductivity, Field (mS/cm)	NA	0.285	0.3294	0.249	0.24174
Oxidation Reduction Potential (ORP), Field (mv)	NA	-62.3	-88.3	14	-102.5
Turbidity, Field (NTU)	NA	0	3.08	229	41.59
pH, Field (pH units)	NA	7.44	7.64	7.2	5.89

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PAGE 2 OF 2

SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS INSTALLED TO COMPLY WITH IDEM APPROVAL OF CLOSURE/POST-CLOSURE PLAN

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

WARRICK COUNTY, INDIANA

	Location Group	Action Level								West As	h Pond							
	Location Name		WAP-6S	WAP-6S	WAP-6S	WAP-6I	WAP-6I	WAP-6D	WAP-6D	WAP-7S	WAP-7S	WAP-7D	WAP-7D	WAP-8S	WAP-8S	WAP-8S	WAP-8I	WAP-8I
	Sample Name	GWPS	WAP-6S-20221117	WAP-6S-20221128	WAP-6S-20230519	WAP-6I-20221117	WAP-6I-20230518	WAP-6D-20221117	WAP-6D-20230518	WAP-7S-20221122	WAP 7S-20230522	WAP-7D-20221122	WAP 7D-20230522	WAP-8S-20221117	WAP-8S-20230517	DUP 1-20230517	WAP-8I-20221118	WAP-8I-20230517
	Sample Date	GWP3	11/17/2022	11/28/2022	05/19/2023	11/17/2022	05/18/2023	11/17/2022	05/18/2023	11/22/2022	05/22/2023	11/22/2022	05/22/2023	11/17/2022	05/17/2023	05/17/2023	11/18/2022	05/17/2023
	Lab Sample ID		180-148407-11	180-148607-1	180-156913-4	180-148407-12	180-156913-5	180-148407-13	180-156913-6	180-148407-14	180-157134-3	180-148407-15	180-157134-2	180-148407-16	180-156881-4	180-156881-9	180-148407-17	180-156881-5
Detection Monitoring - EPA Appendix III Cons	tituents (mg/L)																	1
Boron, Total		4	2.4	-	2.6	0.085	0.2 U	0.042	0.2 U	15	15	11	12	2.3	2.9	2.5	0.071	0.073 J
Calcium, Total		NA	93	-	100	43	35	39	40	180	210	360	380	120	140	140	45	47
Chloride		NA	36	-	41	19	20	21	21	79	90	180	150	68	69	70	21	25
Fluoride		4	0.46	-	0.24	0.15	0.14	0.15	0.14	0.14	0.13	0.52	0.4	0.18	0.17	0.17	0.2	0.2
pH (lab) (pH units)		NA	7.7 J	-	7.4 J	7.9 J	7.8 J	7.9 J	7.8 J	10.1 J	9.9 J	7.7 J	7.6 J	7.8 J	7.7 J	7.7 J	7.9 J	7.6 J
Sulfate		NA	120	-	140	46	39	40	40	390	470	1300	1100	250	270	280	50	53
Total Dissolved Solids (TDS)		NA	-	450	540	240	180	230	200	890	960	2000	1900	730	720	690	260	230 J
Assessment Monitoring - EPA Appendix IV Co	nstituents (mg/L)																	1
Antimony, Total		0.006	0.002 U	-	0.002 U	0.0013 J	0.0013 J	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	0.0011 J	-	0.0015	0.0044 J	0.0057	0.0046 J	0.005	0.0071	0.0057	0.001 J	0.0011 J	0.017	0.016	0.017	0.0037 J	0.0092
Barium, Total		2	0.049	-	0.066	0.15	0.14	0.17	0.18	0.042	0.05 J+	0.031	0.031 J+	0.17	0.2	0.2	0.049	0.063 J+
Beryllium, Total		0.004	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										
Chromium, Total		0.1	0.005 U	-	0.002 U	0.005 U	0.002 U	0.005 U	0.002 U	0.005 U	0.002 U	0.002 U	0.005 U	0.002 U				
Cobalt, Total		0.019	0.0009 J	-	0.0011	0.00027 J	0.0005 U	0.001 U	0.0005 U	0.001 U	0.001 U	0.0037	0.0032	0.00099 J	0.0012	0.0014	0.00042 J	0.00034 J
Lead, Total		0.035	0.001 U	-	0.001 U	0.001 U	0.001 U	0.001 U										
Lithium, Total		0.04	0.008 U	-	0.0039 J	0.008 U	0.0033 J	0.008 U	0.0026 J	0.16	0.2	0.05	0.063	0.022	0.023	0.026	0.008 U	0.0026 J
Mercury, Total		0.002	0.0002 U	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U										
Molybdenum, Total		0.1	0.12	-	0.13	0.0042 J	0.0046 J	0.0018 J	0.0021 J	0.22	0.27	0.23	0.2	0.24	0.21	0.22	0.024	0.028
Selenium, Total		0.05	0.005 U	-	0.005 U	0.005	0.0034 J	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										
Radiological (pCi/L)																		1
Radium-226		NA	0.0354 U ± 0.073	-	1 U ± 0.12	0.218 ± 0.1	0.197 ± 0.133	0.385 ± 0.124	0.211 ± 0.146	0.137 ± 0.0797	1 U ± 0.08	0.377 ± 0.127	0.414 ± 0.155	0.226 ± 0.102	0.247 ± 0.123	0.225 ± 0.154	0.207 ± 0.0936	1 U ± 0.0995
Radium-228		NA	0.704 ± 0.386	-	1 U ± 0.423	1.44 ± 0.546	1 U ± 0.319	1.25 ± 0.492	1 U ± 0.397	0.647 ± 0.389	1 U ± 0.316	1.44 ± 0.439	0.925 ± 0.453	1.29 ± 0.467	0.799 ± 0.435	0.745 ± 0.417	1.63 ± 0.525	1 U ± 0.433
Radium-226 & 228		NA	0.739 J ± 0.393	-	5 U ± 0.44	1.66 ± 0.555	5 UJ ± 0.346	1.63 ± 0.507	0.713 J ± 0.423	0.784 ± 0.397	5 U ± 0.326	1.82 ± 0.457	1.34 ± 0.479	1.51 ± 0.478	1.05 ± 0.452	0.969 ± 0.445	1.84 ± 0.533	5 U ± 0.444
Field Parameters																		
Temperature (Deg C)		NA	15.01	15.34	18.94	11.29	17.73	13.54	18.84	16.46	20.45	16.23	19.57	8.07	18.76	18.76	15.27	19.99
Dissolved Oxygen, Field (mg/L)		NA	0.4	0.13	0.19	2.83	0.18	2.05	0.5	0.55	0.64	0.31	0.29	2.58	0.25	0.25	0.32	0.32
Conductivity, Field (mS/cm)		NA	0.544	0.51607	0.89305	0.265	0.31618	0.258	0.35988	0.814	1.2179	1.683	2.3797	0.662	1.038	1.038	0.296	0.39887
Oxidation Reduction Potential (ORP), Field (my	/)	NA	4.9	-52.5	-42.1	27.6	-116.5	-44.6	-131.6	-28	-2.2	-43.5	-56.3	-49	-140.9	-140.9	-29.5	-78
Turbidity, Field (NTU)		NA	4	0.69	15.7	0	3.13	0	0	0	0	0	0	0	2	2	29	6.4
pH, Field (pH units)		NA	6.93	7.31	6.98	7.26	7.56	7.33	7.55	10.57	10.5	7.25	7.23	7.34	7.48	7.48	7.19	7.31

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.

USEPA: United States Environmental Protection Agency.

Results in **bold** are detected.

- USEPA. 2016. 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.

PAGE 2 OF 2 TABLE IV

SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS INSTALLED TO COMPLY WITH IDEM APPROVAL OF CLOSURE/POST-CLOSURE PLAN

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

WARRICK COUNTY, INDIANA

Location Group	Action Level	West A	sh Pond
Location Name		WAP-8D	WAP-8D
Sample Name	CHIPS	WAP-8D-20221118	WAP-8D-20230517
Sample Date	GWPS	11/18/2022	05/17/2023
Lab Sample ID		180-148407-18	180-156881-6
Detection Monitoring - EPA Appendix III Constituents (mg/L)			
Boron, Total	4	0.046	0.055 J
Calcium, Total	NA	42	50
Chloride	NA	21	24
Fluoride	4	0.17	0.18
pH (lab) (pH units)	NA	7.9 J	7.7 J
Sulfate	NA	45	56
Total Dissolved Solids (TDS)	NA	220	240
			-10
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)	0.006	0.002.11	0.002.11
Antimony, Total	0.006	0.002 U	0.002 U
Arsenic, Total	0.025	0.0025 J	0.0028
Barium, Total	2	0.062	0.079
Beryllium, Total	0.004	0.001 U	0.001 U
Cadmium, Total	0.005	0.001 U	0.001 U
Chromium, Total	0.1	0.005 U	0.002 U
Cobalt, Total	0.019	0.001 U	0.0005 U
Lead, Total	0.035	0.001 U	0.001 U
Lithium, Total	0.04	0.008 U	0.002 J
Mercury, Total	0.002	0.0002 U	0.0002 U
Molybdenum, Total	0.1	0.0012 J	0.0012 J
Selenium, Total	0.05	0.005 U	0.005 U
Thallium, Total	0.002	0.001 U	0.001 U
Radiological (pCi/L)			
Radium-226	NA	0.212 ± 0.0913	0.165 ± 0.106
Radium-228	NA	1.24 ± 0.425	1 U ± 0.282
Radium-226 & 228	NA	1.46 ± 0.435	5 UJ ± 0.301
Field Parameters			
Temperature (Deg C)	NA	15.2	18.44
Dissolved Oxygen, Field (mg/L)	NA	0.09	0.17
Conductivity, Field (mS/cm)	NA NA	0.255	0.40408
Oxidation Reduction Potential (ORP), Field (mv)	NA.	-99.4	-137.8
Turbidity, Field (NTU)	NA NA	0	0
pH, Field (pH units)	NA NA	7.3	7.45
pri, rieiu (pri units)	INA	7.3	7.43

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.

USEPA: United States Environmental Protection Agency.

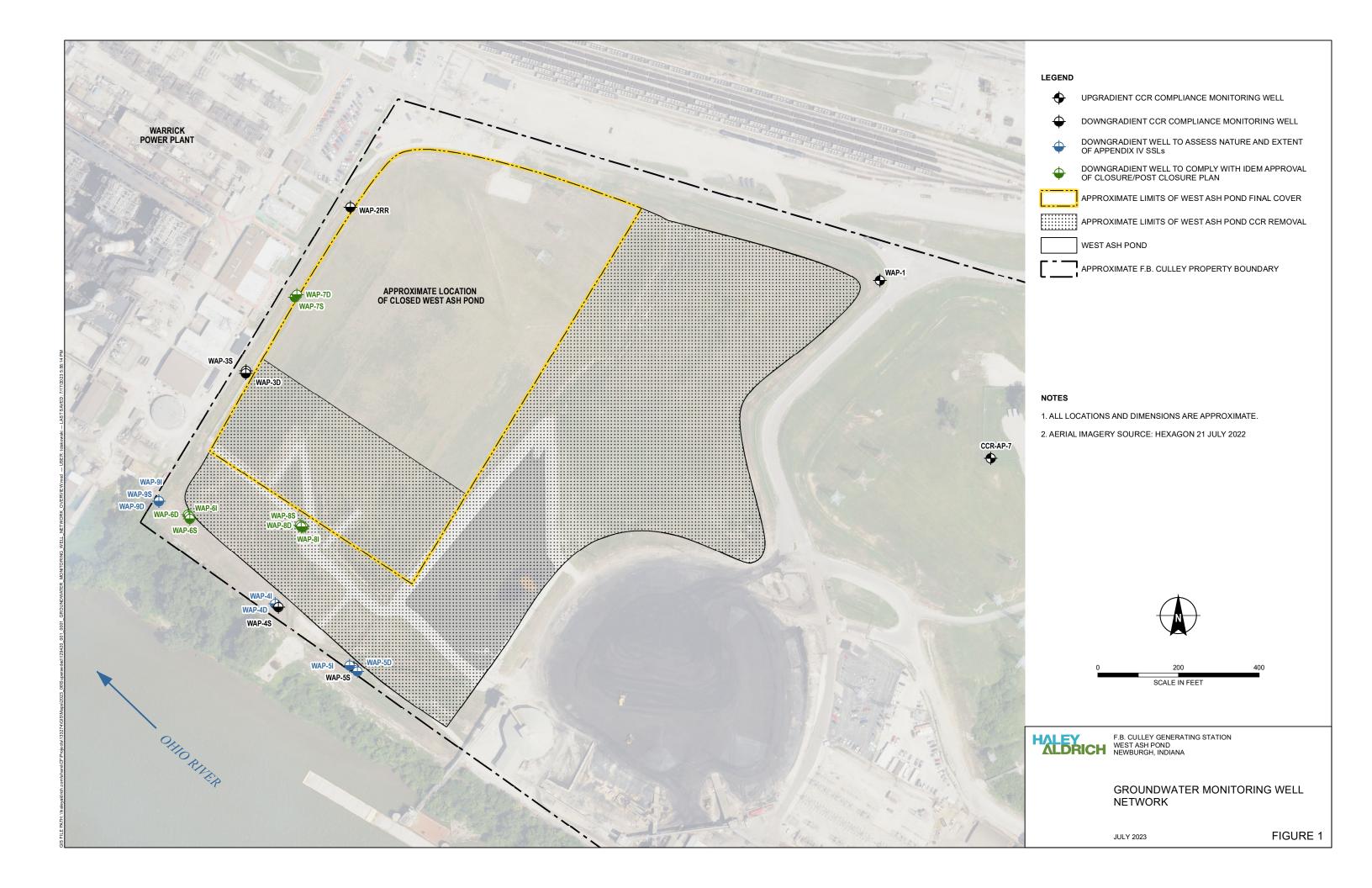
Results in **bold** are detected.

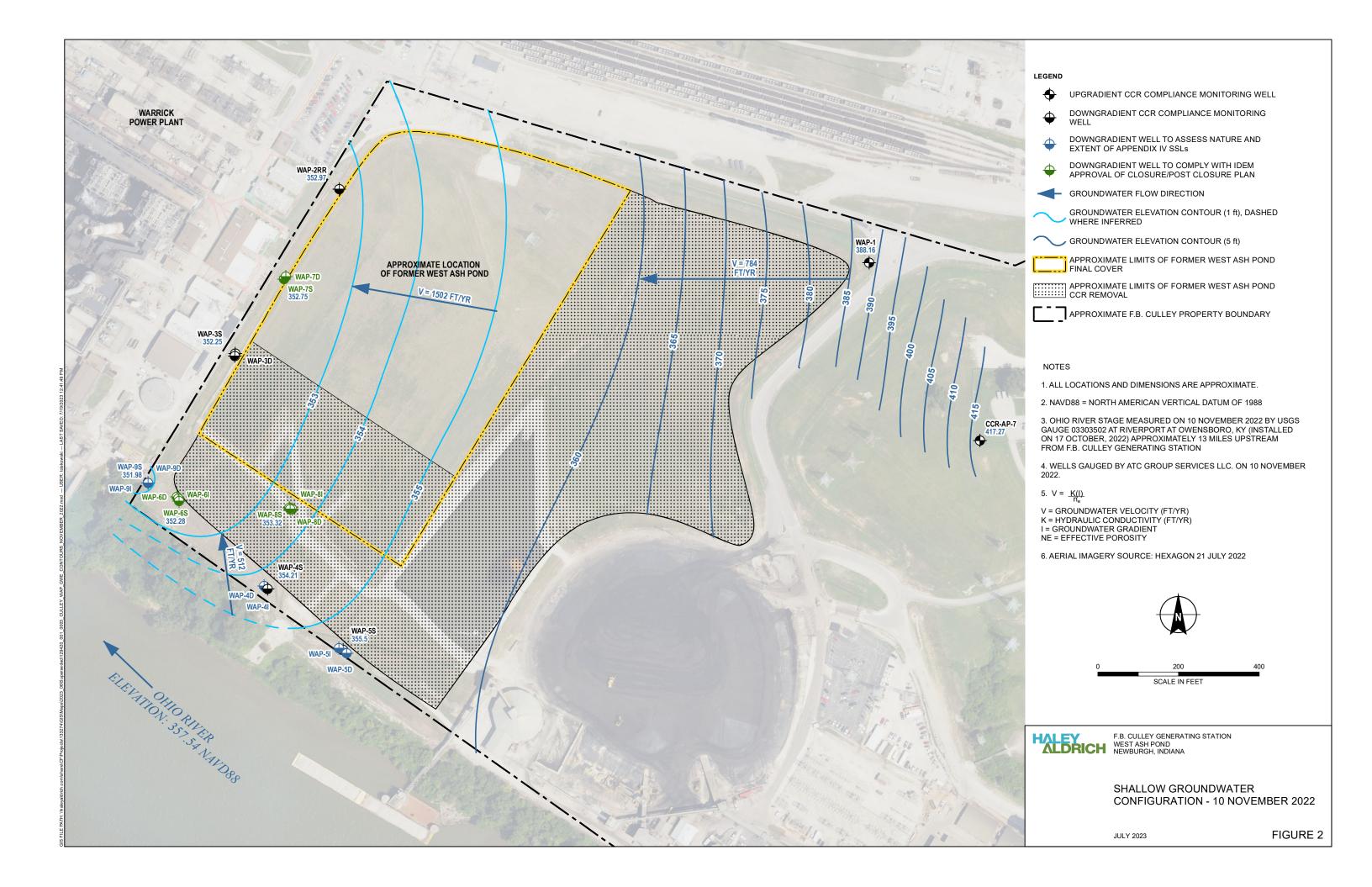
- USEPA. 2016. Final Rule: Disposal of Coal Combustion Residuals from

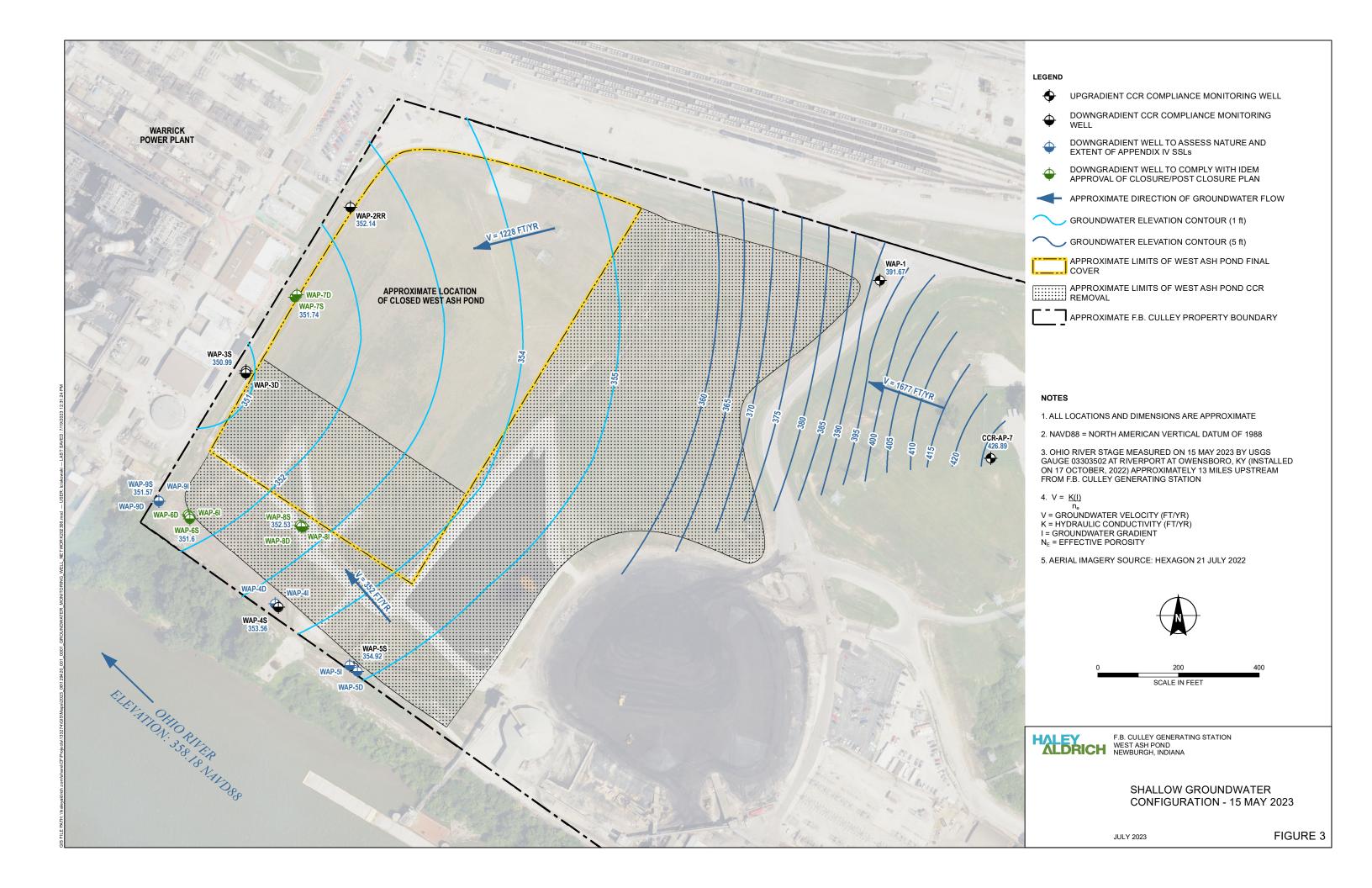
Electric Utilities. July 26. 40 CFR Part 257.

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.

FIGURES







APPENDIX A Summary of Statistical Analysis



HALEY & ALDRICH, INC. 6500 Rockside Road Suite 200 Cleveland, OH 44131 216.739.0555

TECHNICAL MEMORANDUM

29 September 2022 File No. 129420

TO: Southern Indiana Gas and Electric Company

FROM: Haley & Aldrich, Inc.

Todd Plating, Sr. Project Manager Steven F. Putrich, P.E., Project Principal

SUBJECT: Statistical Evaluation of the May 2022 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 2022 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 on July 1, 2022 to determine if Appendix IV groundwater monitoring constituents have been detected in downgradient wells at statistically significant levels (SSL) greater than Groundwater Protection Standards (GWPS), consistent with the requirements in 40 CFR § 257.95.

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

- § 257.93 (g) (1) Data set distribution was evaluated using basic summary statistics, graphical methods, and the Shapiro-Wilks Test of Normality. Parametric methods were used where normal distributions were identified. Those data sets were evaluated for outliers using box plots, Dixon's test and Rosner's test. Outlier identification and data set distribution groups are summarized in Table I.
- § 257.93 (g) (2) Not applicable
- § 257.93 (g) (3) Not applicable

- § 257.93 (g) (4) Levels of confidence and additional supporting information for the use of tolerance intervals and prediction limits are included in Table I.
- § 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 Table I.
- § 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 of spatial variability were necessary.

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. 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 Table I.

Development of GWPS

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 background concentration 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 background concentration. 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

An interwell statistical evaluation was used to identify SSLs. An interwell evaluation compares the most recent values from downgradient compliance wells to a background dataset composed of upgradient well data. Because the CCR unit is in assessment monitoring, no statistical evaluations were conducted on Appendix III (detection monitoring) constituents.

The parametric TL method was used to complete statistical evaluations of the referenced dataset. 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 to evaluate groundwater monitoring data using this method. Parametric TLs utilize normally distributed data or data normalized via a transformation of the sample 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.



Southern Indiana Gas and Electric Company 29 September 2022 Page 3

These statistical evaluations were conducted using the background dataset for all detected Appendix IV constituents using parametric TL. If an Appendix IV constituent concentration from the May 2022 sampling event was greater than the GWPS, the lower confidence limit (LCL) for the downgradient well constituent was used to evaluate if an SSL was indicated. 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.

The UTLs were calculated from the background well dataset using Chemstat software after testing for outlier sample results that would warrant removal from the dataset based on likely error in sampling or measurement. Both visual and statistical outlier tests for the background data were performed using Chemstat and United States Environmental Protection Agency's ProUCL 5.1 software, and a visual inspection of the data was performed using box plots and distribution plots for the downgradient sample data. No sample data were identified as outliers that warranted removal from the dataset.

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample locations were combined to calculate the UTL for each detected Appendix IV constituent. The variability and distribution of the pooled dataset was evaluated to determine the method for UTL calculation. The background concentrations were periodically updated per the document *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009* (Unified Guidance).

TREND SUMMARY

Mann Kendall trend analyses were performed on data sets of sufficient sample size. Results of the trend analysis are included on Table I. In summary, 84 percent of trends analyzed are identified as stable or decreasing. Increasing trends for lithium were identified at WAP-3S and for molybdenum at WAP-2RR and WAP-4S.

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 2022 assessment monitoring event were compared to their respective GWPS (Table I). A sample concentration greater than the GWPS is considered to represent an SSL. 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 SSLs greater than a GWPS 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 greater than the GWPS, additional notification pertaining to the statistical analysis of the May 2022 groundwater analytical results are not required at this time.

Attachments:

Table I – Summary of Assessment Monitoring Statistical Evaluation – May 2022



TABLE

SUMMARY OF ASSESSMENT MONITORING STATISTICAL EVALUATION - MAY 2022
F.B. CULLEY GENERATING STATION
WEST ASH POND

PREPARED: 1 JULY 2022

Location Id	Frequency of Detection	Percent Non-Detects		Mean	50th Percentile (Median)	95th Percentile	Maximum Detect	Variance	Standard Deviation	Coefficient of Variance	CCR MCL/RSL	Report Result Unit	Detection Exceedances (Y/N)	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Group	Distribution Well*	May 2022 Concentration (mg/L)	Detect? LCL (mg/L)	Upper Tolerance Limit (mg/L)	Upper Tolerance Limit (ug/L)	GWPS (Higher of MCL/RSL or Upper Tolerance Limit) mg/L	НЕ	SSL
							CCR	Appendix-IV: Ar	ntimony, Total (mg/L)																	
CCR-AP-7	3/20	85%	0.002-0.002	0.00178	0.002	0.002	0.00083	3.00E-07	5.48E-04	0.3075	0.006	mg/L	N	0	0	No	No	NA		Non-parametric			0.002	2.0	0.006		
WAP-1	8/16	50%	0.002-0.002	0.00156	0.002	0.002	0.002	3.58E-07	5.99E-04	0.384	0.006	mg/L	N	0	0	No	No	Stable		Tron parametric			0.002	2.0	0.000		
WAP-2RR	0/16	100%	0.002-0.002	0.002	0.002	0.002		0.00E+00	0.00E+00	0	0.006	mg/L	N	0	0	NA	NA	NA	NA		0.002	N		N		N	No
WAP-3S	1/16	94%	0.002-0.002	0.0019	0.002	0.002	0.00043	1.54E-07	3.93E-04	0.2064	0.006	mg/L	N	0	0	No	No	NA	NA		0.002	N		N A		N	No
WAP-4S WAP-5S	0/16	100%	0.002-0.02 0.002-0.0021	0.00313	0.002	0.0065		2.03E-05 6.25E-10	4.50E-03 2.50E-05	1.44 0.01246	0.006	mg/L	N N	0	0	NA NA	NA NA	NA NA			0.002	N				N N	No No
WAI 33	0/16	10070	0.002 0.0021	0.00201	0.002	0.002023	CCI	R Appendix-IV: A			0.000	mg/L			, , ,	N/A	N/A	14/4			0.002	N					110
CCR-AP-7	20/20	0%	-	0.00627	0.006	0.01515	0.018	1.83E-05	4.28E-03	0.683	0.01	mg/L	Υ	2	0	Yes	No	Stable									
WAP-1	16/16	0%	-	0.00872	0.00695	0.022	0.025	4.11E-05	6.41E-03	0.7357	0.01	mg/L	Y	4	0	Yes	No	Stable		Non-parametric			0.025	25.0	0.025		
WAP-2RR	15/16	6%	0.001-0.001	0.00166	0.000935	0.006375	0.0078	4.37E-06	2.09E-03	1.261	0.01	mg/L	N	0	0	Yes	No	Stable			0.00100	Υ		N		N	No
WAP-3S	16/16	0%	-	0.00236	0.00225	0.00445	0.0064	2.21E-06	1.49E-03	0.6301	0.01	mg/L	N	0	0	Yes	No	Decrease			0.00031	Y		N		N	No
WAP-4S	16/16	0%	-	0.00412	0.00425	0.0061	0.0061	1.85E-06	1.36E-03	0.33	0.01	mg/L	N	0	0	Yes	No	Stable			0.0061	Y		N		N	No
WAP-5S	14/16	12%	0.001-0.001	0.00103	0.00073	0.002325	0.0042	8.20E-07	9.05E-04	0.8805	0.01	mg/L	N	0	0	Yes	No	Stable			0.00039	Υ		N		N	No
660 40 7	20/20	00/		0.422	0.42	0.10		R Appendix-IV: E		-	-		N.		0	Ne	N-	Chalala									
CCR-AP-7 WAP-1	20/20 16/16	0%	-	0.132 0.534	0.13	0.19	0.19	8.42E-04 3.43E-02	2.90E-02 1.85E-01	0.2199	2	mg/L mg/L	N N	0	0	No Yes	No No	Stable Stable		Non-parametric			0.990	990.0	2.000		
WAP-2RR	16/16	0%	-	0.0416	0.473	0.068	0.086	2.79E-04	1.67E-02	0.4015	2	mg/L	N	0	0	No	No	Stable			0.025	Y				N	No
WAP-3S	16/16	0%	-	0.184	0.185	0.36	0.39	1.51E-02	1.23E-01	0.6669	2	mg/L	N	0	0	No	No	Stable			0.030	Y		N		N	No
WAP-4S	16/16	0%	-	0.056	0.056	0.06725	0.08	6.63E-05	8.14E-03	0.1454	2	mg/L	N	0	0	Yes	No	Decrease			0.057	Y		N		N	No
WAP-5S	16/16	0%	-	0.0533	0.053	0.0615	0.063	2.94E-05	5.43E-03	0.1018	2	mg/L	N	0	0	No	No	Decrease			0.048	Υ		N		N	No
							CCR	Appendix-IV: Be	eryllium, Total (mg/L)																	
CCR-AP-7	7/20	65%		0.000737	0.001	0.001	0.00075	1.52E-07	3.89E-04	0.5281	0.004	mg/L	N	0	0	No	No	Stable		Non-parametric			0.001	1.2	0.004		
WAP-1	13/16	19%	0.001-0.001	0.000576	0.000455	0.00105	0.0012	1.42E-07	3.77E-04	0.6551	0.004	mg/L	N	0	0	No	No	Stable									
WAP-2RR	2/16	88%	0.001-0.001	0.000913	0.001	0.001	0.00037	5.69E-08	2.39E-04	0.2613	0.004	mg/L	N	0	0	No	No	NA			0.001	N		N		N N	No
WAP-3S WAP-4S	1/16	94%	0.001-0.001 0.001-0.001	0.000942	0.001	0.001	0.000068	5.43E-08 0.00E+00	2.33E-04 0.00E+00	0.2474	0.004	mg/L mg/L	N N	0	0	No NA	No NA	NA NA	NA		0.001	N N				N N	No No
WAP-5S	0/16 1/16	94%	0.001-0.001	0.000943	0.001	0.001	0.000084	5.24E-08	2.29E-04	0.2429	0.004	mg/L	N	0	0	No	No	NA NA			0.001	N				N N	No
	1,10							Appendix-IV: Ca													0.001						
CCR-AP-7	2/20	90%	0.001-0.001	0.000923	0.001	0.001	0.00032	5.70E-08	2.39E-04	0.2587	0.005	mg/L	N	0	0	No	No	NA		Non noromotrio			0.0010	1.0	0.005		
WAP-1	7/16	56%	0.001-0.001	0.000688	0.001	0.001	0.00049	1.42E-07	3.76E-04	0.5471	0.005	mg/L	N	0	0	No	No	Stable		Non-parametric			0.0010	1.0	0.005		
WAP-2RR	14/16	12%	0.001-0.001	0.00053	0.00044	0.001	0.001	5.96E-08	2.44E-04	0.4606	0.005	mg/L	N	0	0	No	No	Stable			0.0005	Υ		N		N	No
WAP-3S	9/16	44%	0.001-0.001	0.000559	0.00027	0.001	0.0003	1.62E-07	4.02E-04	0.7194	0.005	mg/L	N	0	0	No	No	Stable			0.0010	N		1		N	No
WAP-4S	2/16	88%	0.001-0.001	0.000902	0.001	0.001	0.00025	7.21E-08	2.68E-04	0.2976	0.005	mg/L	N N	0	0	No No	No No	NA			0.001	N		, n		N N	No No
WAP-5S	1/16	94%	0.001-0.001	0.000947	0.001	0.001		4.52E-08 Appendix-IV: Ch	2.13E-04	0.2244 (mg/L)	0.005	mg/L	N	U	0	INO		NA			0.001	N				IN .	
CCR-AP-7	11/20	45%	0.0014-0.002	0.00342	0.002	0.00684	0.019	1.60E-05	4.00E-03	1.168	0.1	mg/L	N	0	0	Yes	No	Stable									
WAP-1	15/16	6%	0.0022-0.0022	0.0151	0.0115	0.04375	0.046	1.71E-04	1.31E-02	0.8657	0.1	mg/L	N	0	0	No	No	Stable		Non-parametric			0.046	46.0	0.100		
WAP-2RR	2/16	88%	0.002-0.002	0.00236	0.002	0.0045	0.0057	1.07E-06	1.03E-03	0.4371	0.1	mg/L	N	0	0	No	No	Stable			0.0020	N		N		N	No
WAP-3S	3/16	81%	0.002-0.0029	0.00209	0.002	0.002925	0.003	1.92E-07	4.38E-04	0.2099	0.1	mg/L	N	0	0	Yes	No	Stable			0.0020	N		N		N	No
WAP-4S	1/16	94%	0.002-0.002	0.00193	0.002	0.002	0.00088	7.84E-08	2.80E-04	0.1451	0.1	mg/L	N	0	0	No	No	NA			0.002	N		N		N	No
WAP-5S	0/16	100%	0.002-0.002	0.002	0.002	0.002		0.00E+00	0.00E+00	0	0.1	mg/L	N	0	0	No	No	NA			0.002	N		N		N	No
CCR-AP-7	40/00	5%	0.0005-0.0005	0.00244	0.00105	0.00588	0.015	1.18E-05			0.006	/I	Y	1	0	Yes	No	Decrease									
WAP-1	19/20 16/16	0%	0.0005-0.0005	0.00244	0.00103	0.00388	0.013	2.89E-05	3.44E-03 5.38E-03	1.41 0.8603	0.006	mg/L mg/L	Y	5	0	No	No	Stable		Non-parametric			0.019	19.0	0.019		
WAP-2RR	16/16	0%	-	0.00023	0.0022	0.007075	0.0097	5.15E-06	2.27E-03	0.8502	0.006	mg/L	Y	2	0	Yes	No	Stable			0.00220	Υ		N		N	No
WAP-3S	16/16	0%	-	0.000881	0.0007	0.00165	0.0018	2.31E-07	4.80E-04	0.5449	0.006	mg/L	N	0	0	No	No	Stable			0.00069	Y		N		N	No
WAP-4S	16/16	0%	-	0.00231	0.00185	0.004275	0.0093	3.61E-06	1.90E-03	0.8214	0.006	mg/L	Υ	1	0	Yes	No	Stable			0.002	Υ		N		N	No
WAP-5S	16/16	0%	-	0.00748	0.00785	0.009325	0.0094	3.56E-06	1.89E-03	0.2523	0.006	mg/L	Y	15	0	Yes	No	Stable			0.006	Υ		N		N	No
								CCR Appendix-II																			
CCR-AP-7	20/20	0%	-	1.24	1.16	2.31	2.88	7.38E-02	5.43E-01	1.7524	4	mg/L	N	0	0	Yes		Increase		Normal			2.000	2000.0	4.000		
WAP-1	16/16	0%	-	1.648	1.12	5.8	8	8.48E-01	1.84E+00	4.472	4	mg/L	N N	0	0	Yes	No	Stable			0.400	V				A1	
WAP-2RR WAP-3S	16/16	0%	-	0.912 2.216	0.92 2.22	1.512 3.058	1.6 3.08	2.63E-02 9.28E-02	3.24E-01 6.09E-01	1.4256	4	mg/L mg/L	N N	0	0	No No	No No	Increase Stable			0.400	Y				N N	No No
WAP-4S	16/16 16/16	0%	-	0.804	0.82	1.054	1.12	9.28E-02 8.54E-03	1.85E-01	0.9212	4	mg/L	N N	0	0	No	No	Stable			0.600 0.160	Y				N N	No
WAP-5S	15/16	6%	0.1-0.1	0.404	0.398	0.708	0.84	5.84E-03	1.53E-01	1.5088	4	mg/L	N	0	0	Yes		Stable			0.030	Y		N		N	No
								CR Appendix-IV:																			
CCR-AP-7	13/20	35%	0.001-0.001	0.0032	0.001	0.009265	0.02	2.20E-05	4.69E-03	1.465	0.015	mg/L	Y	1	0	Yes	No	Stable		Non-parametric			0.035	35.0	0.035		
WAP-1	16/16	0%	-	0.0118	0.00965	0.03425	0.035	1.07E-04	1.04E-02	0.8748	0.015	mg/L	Y	3	0	No	No	Stable		on parametric			5.055	33.0	5.555		
WAP-2RR	7/16	56%	0.001-0.001		0.001	0.0058	0.0064	3.26E-06	1.81E-03	1.228	0.015	mg/L	N	0	0	Yes	No	Stable			0.00100	N		1		N	No
WAP-3S	14/16	12%	0.001-0.001	0.000833	0.000725	0.002025	0.0027	4.25E-07	6.52E-04	0.7828	0.015	mg/L	N	0	0	Yes	No	Stable			0.00100	N		N		N	No
WAP-4S	4/16	75%	0.001-0.001	0.000831	0.001	0.001	0.0007	1.06E-07	3.25E-04	0.3915	0.015	mg/L	N N	0	0	No	No No	Stable			0.001	N N				N N	No
WAP-5S	2/16	88%	0.001-0.001	0.00091	0.001	0.001	0.00036	6.13E-08	2.48E-04	0.2721	0.015	mg/L	IN	0	U	No	No	Stable			0.001	N				- N	No

SUMMARY OF ASSESSMENT MONITORING STATISTICAL EVALUATION - MAY 2022 F.B. CULLEY GENERATING STATION WEST ASH POND

PREPARED: 1 JULY 2022

Location Id	Frequency of Detection	Percent Non-Detects	Range of Non- Detect	Mean	50th Percentile (Median)	95th Percentile	Maximum Detect	Variance	Standard Deviation	Coefficient of Variance	CCR MCL/RSL	Report Result Unit	Detection Exceedances (Y/N)	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Group	Distribution Well*	May 2022 Concentration (mg/L	Detect? LCL (mg/	Upper Tolerance Limit (mg/L)	Upper Tolerance Limit (ug/L)		(Higher of MCL/RSL or Tolerance Limit) mg/L	HE	SSL
							CCR	Appendix-IV: L	ithium, Total (mg	g/L)																		
CCR-AP-7	20/20	0%	-	0.0141	0.011	0.02095	0.039	5.07E-05	7.12E-03	0.5051	0.04	mg/L	N	0	0	Yes	No	Decrease						20.0				
WAP-1	16/16	0%	-	0.0132	0.0105	0.02475	0.027	3.62E-05	6.02E-03	0.4566	0.04	mg/L	N	0	0	No	No	Stable		Non-parametric			0.039	39.0		0.040		
WAP-2RR	16/16	0%	-	0.0329	0.0305	0.05925	0.06	2.25E-04	1.50E-02	0.4549	0.04	mg/L	Y	5	0	No	No	Decrease			0.0260	Υ			N		N	No
WAP-3S	16/16	0%	-	0.0657	0.068	0.09025	0.1	4.01E-04	2.00E-02	0.3048	0.04	mg/L	Y	13	0	No	No	Increase			0.0790	Y			Y		Υ	Yes
WAP-4S	10/16	38%	0.005-0.005	0.00779	0.005	0.01625	0.017	2.40E-05	4.89E-03	0.6285	0.04	mg/L	N	0	0	No	No	Decrease			0.001	Y			N		N	No
WAP-5S	5/16	69%	0.005-0.05	0.00816	0.005	0.0245	0.016	1.33E-04	1.16E-02	1.415	0.04	mg/L	N	0	1	Yes	No	Stable			0.001	Y			N		N	No
							CCR	Appendix-IV: N	lercury, Total (m	g/L)																		
CCR-AP-7	0/17	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0.00E+00	0.00E+00	0	0.002	mg/L	N	0	0	NA	NA	NA	NA	Non-parametric			0.0002	0.2		0.002		
WAP-1	0/14	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0.00E+00	0.00E+00	0	0.002	mg/L	N	0	0	NA	NA	NA	NA	- Non-parametric			0.0002	0.2		0.002		
WAP-2RR	0/14	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0.00E+00	0.00E+00	0	0.002	mg/L	N	0	0	NA	NA	NA	NA		0.0002	N			N		N	No
WAP-3S	0/14	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0.00E+00	0.00E+00	0	0.002	mg/L	N	0	0	NA	NA	NA	NA		0.0002	N			N		N	No
WAP-4S	0/15	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0.00E+00	0.00E+00	0	0.002	mg/L	N	0	0	NA	NA	NA			0.000	N			N		N	No
WAP-5S	0/14	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0.00E+00	0.00E+00	0	0.002	mg/L	N	0	0	NA	NA	NA			0.000	N			N		N	No
							CCR Ap	pendix-IV: Mol	ybdenum, Total ((mg/L)																		
CCR-AP-7	20/20	0%	-	0.00393	0.00255	0.00901	0.013	1.02E-05	3.19E-03	0.8126	0.1	mg/L	N	0	0	No	No	Decrease		Non-parametric			0.013	13.0		0.100		
WAP-1	15/16	6%	0.005-0.005	0.00167	0.00125	0.00335	0.0028	1.28E-06	1.13E-03	0.6758	0.1	mg/L	N	0	0	Yes	No	Stable		Non-parametric			0.013	13.0		0.100		
WAP-2RR	16/16	0%	-	0.0566	0.046	0.115	0.16	1.34E-03	3.66E-02	0.6464	0.1	mg/L	Y	2	0	Yes	No	Increase			0.0820	Y			Υ		N	No
WAP-3S	16/16	0%	-	0.896	0.935	1.275	1.5	9.13E-02	3.02E-01	0.3374	0.1	mg/L	Y	16	0	No	No	Stable			0.7500	Y			Y		Υ	Yes
WAP-4S	16/16	0%	-	0.407	0.43	0.5025	0.51	1.47E-02	1.21E-01	0.2978	0.1	mg/L	Y	15	0	Yes	No	Increase			0.510	Y			Y		Y	Yes
WAP-5S	14/16	12%	0.005-0.005	0.0264	0.000835	0.1037	0.4	9.93E-03	9.96E-02	3.778	0.1	mg/L	Y	1	0	Yes	No	Stable			0.005	N			N		N	No
							CCR A	ppendix-IV: Rad	lium-226 & 228 (pCi/L)																		
CCR-AP-7	15/20	25%	5-5	1.93	1.065	5	1.72	3.42E+00	1.85E+00	0.958	5	pCi/L	N	0	0	No	No	Stable	NA	Non-parametric			5.00			5.000		
WAP-1	13/16	19%	5-5	2.17	1.42	5	4.74	2.79E+00	1.67E+00	0.7708	5	pCi/L	N	0	0	No	No	Stable	NA									
WAP-2RR	9/16	44%	5-5	2.67	1.84	5	2.15	4.68E+00	2.16E+00	0.8089	5	pCi/L	N	0	0	No	No	Stable			5.000	N			N		N	No
WAP-3S	12/16	25%	5-5	2.01	1.085	5	1.38	3.22E+00	1.80E+00	0.8947	5	pCi/L	N	0	0	No	No	Stable			0.639	Y			N		N	No
WAP-4S	7/16	56%	5-5	3.1	5	5	1.21	4.97E+00	2.23E+00	0.7183	5	pCi/L	N	0	0	No	No	Stable			0.547	Y			N		N	No
WAP-5S	7/16	56%	5-5	3.05	5	5	0.789	5.23E+00	2.29E+00	0.7496	5	pCi/L	N	0	0	No	No	Stable			0.789	Υ			N		N	No
							CCR	Appendix-IV: Se	lenium, Total (m	ıg/L)																		
CCR-AP-7	3/18	83%	0.005-0.005	0.00438	0.005	0.005	0.0028	2.23E-06	1.49E-03	0.3404	0.05	mg/L	N	0	0	Yes	NA	NA	NA	Non-parametric			0.005	5.0		0.050		
WAP-1	2/14	86%	0.005-0.005	0.00454	0.005	0.005	0.0018	1.35E-06	1.16E-03	0.2558	0.05	mg/L	N	0	0	No	NA	NA	NA									
WAP-2RR	3/14	79%	0.005-0.005	0.00469	0.005	0.005	0.0049	6.37E-07	7.98E-04	0.1703	0.05	mg/L	N	0	0	No	No	NA			0.0024	Y			N		N	No
WAP-3S	0/14	100%	0.005-0.005	0.005	0.005	0.005		1.25E-20	1.12E-10	2.237E-08	0.05	mg/L	N	0	0	NA	NA	NA	NA		0.005	N			N		N	No
WAP-4S	0/14	100%	0.005-0.005	0.005	0.005	0.005		1.25E-20	1.12E-10	2.237E-08	0.05	mg/L	N	0	0	NA	NA	NA			0.005	N			N		N	No
WAP-5S	0/14	100%	0.005-0.005	0.005	0.005	0.005		1.25E-20	1.12E-10	2.237E-08	0.05	mg/L	N	0	0	NA	NA	NA			0.005	N			N		N	No
									hallium, Total (m																			
CCR-AP-7	4/20	80%	0.001-0.001	0.000842	0.001	0.001	0.00061	1.16E-07	3.41E-04	0.4045	0.002	mg/L	N	0	0	No	No	NA	NA	Non-parametric			0.001	1.0		0.002		
WAP-1	11/16	31%	0.001-0.001	0.000523	0.00044	0.001	0.00063	1.31E-07	3.62E-04	0.6933	0.002	mg/L	N	0	0	No	No	Stable	NA									
WAP-2RR	10/16	38%	0.001-0.001	0.000493	0.000285	0.001	0.00047	1.74E-07	4.17E-04	0.846	0.002	mg/L	N	0	0	No	No	Stable			0.001	N			N		N	No
WAP-3S	0/16	100%	0.001-0.001	0.001	0.001	0.001		0.00E+00	0.00E+00	0	0.002	mg/L	N	0	0	NA	NA	NA	NA		0.001	N			N		N	No
WAP-4S	0/16	100%	0.001-0.001	0.001	0.001	0.001		0.00E+00	0.00E+00	0	0.002	mg/L	N	0	0	NA	NA	NA			0.001	N			N		N	No
WAP-5S	2/16	88%	0.001-0.001	0.000896	0.001	0.001	0.00022	8.18E-08	2.86E-04	0.3192	0.002	mg/L	N	0	0	No	No	NA			0.001	N			N		N	No

Notes:

CCR - Coal Combustion Residuals

WAP - West Ash Pond

IDEM - Indiana Department of Environmental Management

MCL - maximum concentration limit

mg/L - milligrams per liter NA - not applicable

RSL - Regional Screening Level

SSI - Statistically Significant Increase SSL - Statistically Significant Level

HALEY & ALDRICH, INC. 2022_06_HAI FB Culley WAP GW App IV Stats Summary.xlsx

PAGE 2 OF 2



HALEY & ALDRICH, INC. 6500 Rockside Road Suite 200 Cleveland, OH 44131 216.739.0555

TECHNICAL MEMORANDUM

22 March 2023 File No. 129420-032

TO: Southern Indiana Gas and Electric Company

FROM: Haley & Aldrich, Inc.

Todd Plating, Sr. Project Manager Steven F. Putrich, P.E., Project Principal

SUBJECT: Statistical Evaluation of the November 2022 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 2022 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 Groundwater Protection Standards (GWPS), consistent with the requirements in 40 CFR § 257.95.

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

- § 257.93 (g) (1) Data set distribution was evaluated using basic summary statistics, graphical methods, and the Shapiro-Wilks Test of Normality. Parametric methods were used where normal distributions were identified. Those data sets were evaluated for outliers using box plots, Dixon's test and Rosner's test. Outlier identification and data set distribution groups are summarized in Attachment A.
- § 257.93 (g) (2) Not applicable
- § 257.93 (g) (3) Not applicable

- § 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.
- § 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.
- § 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 of spatial variability were necessary.

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. 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 GWPS

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 background concentration 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 background concentration. 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

An interwell statistical evaluation was used to identify SSLs. An interwell evaluation compares the most recent values from downgradient compliance wells to a background dataset composed of upgradient well data. Because the CCR unit is in assessment monitoring, no statistical evaluations were conducted on Appendix III (detection monitoring) constituents.

The parametric TL method was used to complete statistical evaluations of the referenced dataset. 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 to evaluate groundwater monitoring data using this method. Parametric TLs utilize normally distributed data or data normalized via a transformation of the sample 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.



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These statistical evaluations were conducted using the background dataset for all detected Appendix IV constituents using parametric TL. If an Appendix IV constituent concentration from the May 2022 sampling event was greater than the GWPS, the lower confidence limit (LCL) for the downgradient well constituent was used to evaluate if an SSL was indicated. 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.

The UTLs were calculated from the background well dataset using Chemstat software after testing for outlier sample results that would warrant removal from the dataset based on likely error in sampling or measurement. Both visual and statistical outlier tests for the background data were performed using Chemstat and United States Environmental Protection Agency's ProUCL 5.1 software, and a visual inspection of the data was performed using box plots and distribution plots for the downgradient sample data. No sample data were identified as outliers that warranted removal from the dataset.

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample locations were combined to calculate the UTL for each detected Appendix IV constituent. The variability and distribution of the pooled dataset was evaluated to determine the method for UTL calculation. The background concentrations were periodically updated per the document *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009* (Unified Guidance).

TREND SUMMARY

Mann Kendall trend analyses were performed on data sets of sufficient sample size. Results of the trend analysis are included as Attachment A. In summary, 91 percent of trends analyzed for wells are identified as stable or decreasing, excluding background wells and wells with no trend. Increasing trends were identified for lithium at WAP-3S and for molybdenum at WAP-2RR and WAP-4S.

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 2022 assessment monitoring event were compared to their respective GWPS (Attachment A). A sample concentration greater than the GWPS is considered to represent an SSL. 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 greater than a GWPS 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 greater than the GWPS, additional notification



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pertaining to the statistical analysis of the November 2022 groundwater analytical results are not required at this time.

Table 1 – Statistically Significant Level Summary – Appendix IV Constituents

Location ID	Trend	Constituent	Newly Identified SSL	Concentration (mg/L)				
WAP-3S	Increase	Lithium	No	0.088				
WAP-3S	Stable	Molybdenum	No	0.54				
WAP-4S	Increase		No	0.46				

Attachments:

Attachment A – Assessment Monitoring Statistical Analysis Summary – November 2022



ATTACHMENT A Assessment Monitoring Statistical Analysis Summary – November 2022

																										Inter	well Analysis	
Location Id	ЕРА	Frequency of Detection	Percent Non-Detects	Range of Non- Detect	Mean	50th Percentile (Median)	95th Percentile	Maximum Detect	Variance	Standard Deviation	Coefficient of Variance	CCR MCL/RSL	Report Result Unit	Detection Exceedances (Y/N)	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Well*	November 2022 Concentration (mg/L)	Detect?	Lower Confidence Level (LCL) (mg/L)	Upper Tolerance Limit (mg/L)	SSI	GWPS (Higher of MCL/RSL or Upper Tolerance Limit) mg/L	Exceedance above Background at Individual Well	SSL
								CCR Append	ix-IV: Antimony,	Total (mg/L)																		
CCR-AP-7	Background	3/21	86%	0.002-0.002	0.00179	0.002	0.002	0.00083	2.871E-07	0.0005358	0.2992	0.006	mg/L	N	0	0	No	No	NA	Non-parametric				0.002		0.006		
WAP-1	Background	9/17	47%	0.002-0.002	0.00152	0.002	0.002	0.002	3.663E-07	0.0006053	0.3991	0.006	mg/L	N	0	0	No	No	Stable	TVOIT parametric				0.002		0.000		
WAP-2RR	Compliance	0/17	100%	0.002-0.002	0.002	0.002	0.002		0	0	0	0.006	mg/L	N	0	0	NA	NA	NA		0.002	N			N		N	No
WAP-3S	Compliance	1/17	94%	0.002-0.002	0.00191	0.002	0.002	0.00043	0.00000145	0.0003808	0.1996	0.006	mg/L	N	0	0	No	No	NA		0.002	N			N		N	No
WAP-4S	Compliance	0/17	100%	0.002-0.02	0.00306	0.002	0.0056		0.00001906	0.004366	1.427	0.006	mg/L	N	0	1	NA	NA	NA		0.002	N			N		N	No
WAP-5S	Compliance	0/17	100%	0.002-0.0021	0.00201	0.002	0.00202	CCR Appen	5.882E-10 dix-IV: Arsenic, To	0.00002425 otal (mg/L)	0.01209	0.006	mg/L	N	0	0	NA	NA	NA		0.002	N			N		N	No
CCR-AP-7	Background	21/21	0%	-	0.00616	0.0058	0.015	0.018	0.00001765	0.004201	0.6821	0.01	mg/L	Y	2	0	Yes	No	Stable	Non-parametric				0.025		0.025		
WAP-1	Background	17/17	0%	-	0.00844	0.0066	0.0218	0.025	0.00003993	0.006319	0.7492	0.01	mg/L	Y	4	0	Yes	No	Stable							*****		
WAP-2RR	Compliance	16/17	6%	0.001-0.001	0.00163	0.00095	0.00628	0.0078	0.000004111	0.002028	1.243	0.01	mg/L	N	0	0	Yes	No	Stable		0.00120	Y			N		N	No
WAP-3S	Compliance	16/17	6%	0.005-0.005	0.00251	0.0023	0.00528	0.0064	0.000002482	0.001575	0.6266	0.01	mg/L	N	0	0	No	No	Decrease		0.00500	N			N		N	No
WAP-4S	Compliance	17/17	0%	-	0.00458	0.0043	0.00728	0.012	0.000005386	0.002321	0.5063	0.01	mg/L	Y	1	0	Yes	No	Increase		0.012	Υ			N		N	No
WAP-5S	Compliance	14/17	18%	0.001-0.005	0.00126	0.00076	0.00436	0.0042 CCR Appen	0.000001696 dix-IV: Barium, To	0.001302 otal (mg/L)	1.032	0.01	mg/L	N	0	0	Yes	No	Stable		0.005	N			N		N	No
CCR-AP-7	Background	21/21	0%	-	0.13	0.13	0.19	0.19	0.0008478	0.02912	0.2233	2	mg/L	N	0	0	No	No	Stable	Non-parametric				0.990		2.000		
WAP-1	Background	17/17	0%	-	0.527	0.46	0.902	0.99	0.03308	0.1819	0.3451	2	mg/L	N	0	0	Yes	No	Stable	14011-barametric				0.550		2.000		
WAP-2RR	Compliance	17/17	0%	-	0.0411	0.041	0.0668	0.086	0.0002662	0.01632	0.3968	2	mg/L	N	0	0	No	No	Stable		0.033	Y			N		N	No
WAP-3S	Compliance	17/17	0%	-	0.176	0.17	0.358	0.39	0.01547	0.1244	0.7075	2	mg/L	N	0	0	No	No	Decrease		0.037	Y			N		N	No
WAP-4S	Compliance	17/17	0%	-	0.0558	0.056	0.0664	0.08	0.00006307	0.007941	0.1424	2	mg/L	N	0	0	Yes	No	Decrease		0.052	Υ			N		N	No
WAP-5S	Compliance	17/17	0%	-	0.0524	0.053	0.0614	0.063	0.00004324	0.006576	0.1256	2	mg/L	N	0	0	No	No	Decrease		0.037	Υ			N		N	No
									lix-IV: Beryllium,	, . ,																		
CCR-AP-7	Background	7/21	67%	0.001-0.001	0.00075	0.001	0.001	0.00075	1.473E-07	0.0003838	0.5118	0.004	mg/L	N	0	0	No	No	Stable	Non-parametric				0.001		0.004		
WAP-1	Background	13/17	24%	0.001-0.001	0.000601	0.00049	0.00104	0.0012	1.439E-07	0.0003794	0.6316	0.004	mg/L	N	0	0	No	No	Stable									
WAP-2RR	Compliance	2/17	88%	0.001-0.001	0.000918	0.001	0.001	0.00037	5.38E-08	0.000232	0.2526	0.004	mg/L	N	0	0	No	No	NA		0.001	N			N		N	No
WAP-3S	Compliance	1/17	94%	0.001-0.001	0.000945	0.001	0.001	0.000068	5.11E-08	0.000226	0.2392	0.004	mg/L	N	0	0	No	No	NA		0.001	N			N		N	No
WAP-4S	Compliance	0/17	100%	0.001-0.001	0.001	0.001	0.001		0	0	0	0.004	mg/L	N	0	0	NA	NA	NA		0.001	N			N		N	No
WAP-5S	Compliance	1/17	94%	0.001-0.001	0.000946	0.001	0.001	0.000084 CCR Append	4.936E-08 lix-IV: Cadmium,	0.0002222 Fotal (mg/L)	0.2348	0.004	mg/L	N	0	0	No	No	NA		0.001	N			N		N	No
CCR-AP-7	Background	2/21	90%	0.001-0.001	0.000927	0.001	0.001	0.00032	5.445E-08	0.0002334	0.2518	0.005	mg/L	N	0	0	No	No	NA	Non-parametric				0.0010		0.005		
WAP-1	Background	7/17	59%	0.001-0.001	0.000706	0.001	0.001	0.00049	1.384E-07	0.000372	0.527	0.005	mg/L	N	0	0	No	No	Stable									
WAP-2RR	Compliance	15/17	12%	0.001-0.001	0.000516	0.00044	0.001	0.001	5.899E-08	0.0002429	0.4703	0.005	mg/L	N	0	0	No	No	Stable		0.0003	Υ			N		N	No
WAP-3S	Compliance	9/17	47%	0.001-0.001	0.000585	0.0003	0.001	0.0003	1.633E-07	0.000404	0.6903	0.005	mg/L	N	0	0	No	No	Stable		0.0010	N			N		N	No
WAP-4S	Compliance	2/17	88%	0.001-0.001	0.000908	0.001	0.001	0.00025	6.812E-08	0.000261	0.2876	0.005	mg/L	N	0	0	No	No	NA		0.001	N			N		N	No
WAP-5S	Compliance	1/17	94%	0.001-0.001	0.00095	0.001	0.001	0.00015	4.25E-08 ix-IV: Chromium,	0.0002062	0.217	0.005	mg/L	N	0	0	No	No	NA		0.001	N			N		N	No
CCR-AP-7	Packground	11/21	48%	0.0014-0.005	0.0035	0.002	0.0062	0.019		0.003911	1 110	0.1	ma/l	N	0	0	Yes	No	Stable									
WAP-1	Background	11/21	6%	0.0014-0.005	0.0035	0.002	0.0062	0.019	0.00001529 0.0001685	0.003911	1.118 0.8986	0.1	mg/L	N N	0	0	No.	No	Stable	Non-parametric				0.046		0.100		
WAP-2RR	Background Compliance	16/17 2/17	88%	0.0022-0.0022	0.00252	0.002	0.00514	0.0057	0.0001083	0.01238	0.4715	0.1	mg/L mg/L	N	0	0	No	No	NA		0.0050	N			N		N	No
WAP-3S	Compliance	3/17	82%	0.002-0.005	0.00232	0.002	0.00314	0.0037	6.792E-07	0.0001187	0.3649	0.1	mg/L	N	0	0	Yes	No	NA NA		0.0050	N			N		N	No
WAP-4S	Compliance	1/17	94%	0.002-0.005	0.00211	0.002	0.0034	0.00088	6.279E-07	0.0007924	0.3754	0.1	mg/L	N	0	0	No	No	NA NA		0.005	N			N		N	No
WAP-5S	Compliance	0/17	100%	0.002-0.005	0.00218	0.002	0.0026	0.00000	5.294E-07	0.0007321	0.3343	0.1	mg/L	N	0	0	No	No	NA.		0.005	N			N		N	No
		5, 1,	222.0					CCR Appen	ndix-IV: Cobalt, To		3.35.10				_						0.005							
CCR-AP-7	Background	20/21	5%	0.0005-0.0005	0.00236	0.001	0.0054	0.015	0.00001134	0.003368	1.425	0.006	mg/L	Y	1	0	Yes	No	Decrease									
WAP-1	Background	17/17	0%	-	0.00595	0.0047	0.0174	0.019	0.00002869	0.005356	0.9002	0.006	mg/L	Y	5	0	No	No	Stable	Non-parametric				0.019		0.019		
WAP-2RR	Compliance	17/17	0%	-	0.00264	0.0022	0.0069	0.0097	0.000004841	0.0022	0.8329	0.006	mg/L	Y	2	0	Yes	No	Stable		0.00220	Υ			N		N	No
WAP-3S	Compliance	17/17	0%	-	0.000879	0.00071	0.00164	0.0018	2.163E-07	0.000465	0.5288	0.006	mg/L	N	0	0	No	No	Stable		0.00085	Υ			N		N	No
WAP-4S	Compliance	17/17	0%	-	0.00228	0.0018	0.00394	0.0093	0.000003404	0.001845	0.8105	0.006	mg/L	Y	1	0	Yes	No	Stable		0.002	Υ			N		N	No
WAP-5S	Compliance	17/17	0%	-	0.00741	0.0078	0.00932	0.0094 CCR App	0.000003436 endix-III: Fluoride	0.001854 e (mg/L)	0.2503	0.006	mg/L	Υ	16	0	Yes	No	Decrease		0.006	Y			N		N	No
CCR-AP-7	Background	21/21	0%	-	1.272	1.16	2.28	2.88	0.07552	0.5496	1.728	4	mg/L	N	0	0	Yes	No	Increase									
WAP-1	Background	17/17	0%	-	1.832	1.12	5.92	8	0.9384	1.9376	4.228	4	mg/L	N	0	0	Yes	No	Stable	- Normal				2.000		4.000		
WAP-2RR	Compliance	17/17	0%	-	0.94	0.92	1.496	1.6	0.028128	0.33544	1.4292	4	mg/L	N	0	0	No	No	Increase		0.350	Υ			N		N	No
WAP-3S	Compliance	17/17	0%	-	2.236	2.24	3.054	3.08	0.0888	0.596	1.0668	4	mg/L	N	0	0	No	No	Stable		0.640	Υ			N		N	No
WAP-4S	Compliance	17/17	0%	-	0.816	0.88	1.068	1.12	0.008828	0.18792	0.9204	4	mg/L	N	0	0	No	No	Stable		0.260	Υ			N		N	No
WAP-5S	Compliance	16/17	6%	0.1-0.1	0.412	0.4	0.684	0.84	0.005676	0.15068	1.4628	4	mg/L	N	0	0	Yes	No	Stable		0.130	Y			N		N	No
									ndix-IV: Lead, Tot																			
CCR-AP-7	Background	14/21	33%	0.001-0.001	0.00309	0.001	0.0087	0.02	0.00002119	0.004603	1.49	0.015	mg/L	Y	1	0	Yes		Stable	Non-parametric				0.035		0.035		
WAP-1	Background	17/17	0%	- 0.001.0.001	0.0113	0.0094	0.0342	0.035	0.0001055	0.01027	0.9087	0.015	mg/L	Y	3	0	No	No	Stable		0.000							
WAP-2RR	Compliance	7/17	59%	0.001-0.001	0.00144	0.001	0.00576	0.0064	0.000003069	0.001752	1.214	0.015	mg/L	N	0	0	Yes	No	Stable		0.00100	N			N		N	No
WAP-3S	Compliance	14/17	18%	0.001-0.001	0.000843	0.00074	0.00198	0.0027	4.004E-07	0.0006328	0.7507	0.015	mg/L	N	0	0	Yes	No	Stable		0.00100	N			N N		N N	No
WAP-4S	Compliance	4/17	76%	0.001-0.001	0.000841	0.001	0.001	0.0007	1.008E-07	0.0003176	0.3778	0.015	mg/L	N	0	0	No	No	NA NA		0.001	N						No
WAP-5S	Compliance	2/17	88%	0.001-0.001	0.000915	0.001	0.001	0.00036	5.798E-08	0.0002408	0.2631	0.015	mg/L	N	0	0	No	No	NA		0.001	N			N		N	No

Attachment A F.B. Culley Generating Station - West Ash Pond Assessment Monitoring Statistical Analysis Summary - November 2022 Prepared: March 22, 2023

CCR Appendix-IV: Lithium, Total (mg/L)																											
CCR-AP-7	Background	21/21	0%	-	0.0138	0.011	0.02	0.039	0.00005051	0.007107	0.5168	0.04	mg/L	N	0	0	Yes	No	Decrease	Non-parametric			0.039		0.040		
WAP-1	Background	17/17	0%	-	0.0127	0.01	0.0246	0.027	0.00003816	0.006177	0.4873	0.04	mg/L	N	0	0	No	No	Stable	- Non-parametric			0.039		0.040		
WAP-2RR	Compliance	17/17	0%	-	0.0321	0.029	0.0592	0.06	0.0002236	0.01495	0.4664	0.04	mg/L	Y	5	0	No	No	Decrease		0.0180	Υ		N		N	No
WAP-3S	Compliance	17/17	0%	-	0.067	0.07	0.0904	0.1	0.0004051	0.02013	0.3004	0.04	mg/L	Y	14	0	No	No	Increase		0.0880	Υ		Y		Υ	Yes
WAP-4S	Compliance	10/17	41%	0.005-0.008	0.0078	0.005	0.0162	0.017	0.00002246	0.004739	0.6076	0.04	mg/L	N	0	0	No	No	Decrease		0.008	N		N		N	No
WAP-5S	Compliance	5/17	71%	0.005-0.05	0.00815	0.005	0.0228	0.016	0.0001251	0.01118	1.372	0.04	mg/L	N	0	1	Yes	No	NA		0.008	N		N		N	No
CCR Appendix-IV: Mercury, Total (mg/L)																											
CCR-AP-7	Background	0/18	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA	Non-parametric			0.0002		0.002		
WAP-1	Background	0/15	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA	14011 parametric			0.0002		0.002		
WAP-2RR	Compliance	0/15	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.0002	N		N		N	No
WAP-3S	Compliance	0/15	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.0002	N		N		N	No
WAP-4S	Compliance	0/16	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.000	N		N		N	No
WAP-5S	Compliance	0/15	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.000	N		N		N	No
CCR Appendix-IV: Molybdenum, Total (mg/L)																											
CCR-AP-7	Background	21/21	0%	-	0.0038	0.0025	0.0088	0.013	0.000009967	0.003157	0.8298	0.1	mg/L	N	0	0	No	No	Decrease	Non-parametric			0.013		0.100		
WAP-1	Background	15/17	12%	0.005-0.005	0.00187	0.0013	0.005	0.0028	0.000001848	0.001359	0.728	0.1	mg/L	N	0	0	Yes	No	Stable	Tron parametric			0.015		0.100		
WAP-2RR	Compliance	17/17	0%	-	0.0574	0.05	0.112	0.16	0.001264	0.03555	0.6199	0.1	mg/L	Y	2	0	Yes	No	Increase		0.0700	Υ		Y		N	No
WAP-3S	Compliance	17/17	0%	-	0.875	0.92	1.26	1.5	0.09304	0.305	0.3487	0.1	mg/L	Y	17	0	No	No	Stable		0.5400	Υ		Y		Υ	Yes
WAP-4S	Compliance	17/17	0%	-	0.41	0.43	0.502	0.51	0.01394	0.118	0.2879	0.1	mg/L	Y	16	0	Yes	No	Increase		0.460	Y		Y		Υ	Yes
WAP-5S	Compliance	14/17	18%	0.005-0.005	0.0251	0.00086	0.084	0.4	0.009335	0.09662	3.847	0.1	mg/L	Υ	1	0	Yes	No	Stable		0.005	N		N		N	No
									c-IV: Radium-226																		
CCR-AP-7	Background	15/21	29%	5-5	2.08	1.11	5	1.72	3.701	1.924	0.9259	5	pCi/L	N	0	0	No	No	Stable	Non-parametric			5.00		5.000		
WAP-1	Background	14/17	18%	5-5	2.17	1.48	5	4.74	2.617	1.618	0.7453	5	pCi/L	N	0	0	No	No	Stable								
WAP-2RR	Compliance	10/17	41%	5-5	2.58	1.53	5	2.15	4.545	2.132	0.8275	5	pCi/L	N	0	0	No	No	Stable		1.020	Υ		N		N	No
WAP-3S	Compliance	13/17	24%	5-5	1.96	1.09	5	1.38	3.055	1.748	0.8917	5	pCi/L	N	0	0	No	No	Stable		1.230	Υ		N		N	No
WAP-4S	Compliance	8/17	53%	5-5	2.98	5	5	1.21	4.897	2.213	0.7417	5	pCi/L	N	0	0	No	No	Stable		1.080	Y		N		N	No
WAP-5S	Compliance	8/17	53%	5-5	2.96	5	5	1.49	5.043	2.246	0.7591	5	pCi/L	N	0	0	No	No	Stable		1.490	Υ		N		N	No
									lix-IV: Selenium, 1	, . ,																	
CCR-AP-7	Background	3/19	84%	0.005-0.005	0.00441	0.005	0.005	0.0028	0.000002122	0.001457	0.3299	0.05	mg/L	N	0	0	Yes	NA	NA	Non-parametric			0.005		0.050		
WAP-1	Background	2/15	87%	0.005-0.005	0.00457	0.005	0.005	0.0018	0.000001268	0.001126	0.2462	0.05	mg/L	N	0	0	No	NA	NA								
WAP-2RR	Compliance	4/15	73%	0.005-0.005	0.00477	0.005	0.00527	0.0059	6.895E-07	0.0008304	0.1742	0.05	mg/L	N	0	0	No	No	NA		0.0059	Y		Υ		N	No
WAP-3S	Compliance	0/15	100%	0.005-0.005	0.005	0.005	0.005		7.744E-21	8.8E-11	1.76E-08	0.05	mg/L	N	0	0	NA	NA	NA		0.005	N		N		N	No
WAP-4S	Compliance	0/15	100%	0.005-0.005	0.005	0.005	0.005		7.744E-21	8.8E-11	1.76E-08	0.05	mg/L	N	0	0	NA	NA	NA		0.005	N		N		N	No
WAP-5S	Compliance	0/15	100%	0.005-0.005	0.005	0.005	0.005	000 4	7.744E-21	8.8E-11	1.76E-08	0.05	mg/L	N	0	0	NA	NA	NA		0.005	N		N		N	No
									lix-IV: Thallium, T																		
CCR-AP-7	Background	4/21	81%	0.001-0.001	0.00085	0.001	0.001	0.00061	1.114E-07	0.0003338	0.3928	0.002	mg/L	N	0	0	No	No	NA	Non-parametric			0.001		0.002		
WAP-1	Background	11/17	35%	0.001-0.001	0.000551	0.00047	0.001	0.00063	1.365E-07	0.0003695	0.6709	0.002	mg/L	N	0	0	No	No	Stable								
WAP-2RR	Compliance	10/17	41%	0.001-0.001	0.000523	0.0003	0.001	0.00047	1.784E-07	0.0004224	0.8074	0.002	mg/L	N	0	0	No	No	Stable		0.001	N		N		N	No
WAP-3S	Compliance	0/17	100%	0.001-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N N	0	0	NA	NA	NA		0.001	N		N		N	No
WAP-4S	Compliance	0/17	100%	0.001-0.001	0.001	0.001	0.001	0.00000	0	0	0 2002	0.002	mg/L	N	0	0	NA	NA	NA		0.001	N		N		N	No
WAP-5S	Compliance	2/17	88%	0.001-0.001	0.000902	0.001	0.001	0.00022	7.728E-08	0.000278	0.3083	0.002	mg/L	N	0	0	No	No	NA		0.001	N		N		N	No

Notes:

CCR - Coal Combustion Residuals

WAP - West Ash Pond

IDEM - Indiana Department of Environmental Management

MCL - maximum concentration limit

mg/L - milligrams per liter

NA - not applicable

RSL - Regional Screening Level

SSI - Statistically Significant Increase SSL - Statistically Signficant Level

APPENDIX B Field Forms

VECTREN - FB CULLEY STATION WEST ASH POND

CCR Groundwater Sampling Event Gauging Date: November 10, 2022 ATC Project No. 170LF01280

	T		1
WELL ID	DATE	TIME	DTW FROM TOC
West Ash Pond Wells			
CCR-AP-7	11/10/2022	15:30	16.84
WAP-1	11/10/2022	12:20	15.23
WAP-2RR	11/10/2022	14:55	38.77
WAP-3S	11/10/2022	15:01	36.22
WAP-3D	11/10/2022	15:06	36.18
WAP-4S	11/10/2022	14:00	30.40
WAP-4I	11/10/2022	14:07	30.50
WAP-4D	11/10/2022	14:12	32.82
WAP-5S	11/10/2022	14:23	29.18
WAP-5I	11/10/2022	14:30	29.18
WAP-5D	11/10/2022	14:36	29.75
			33.67
WAP-6S	11/10/2022	12:30	
WAP-6I	11/10/2022	12:36	34.60
WAP-6D	11/10/2022	12:42	38.50
WAP-7S	11/10/2022	14:45	36.80
WAP-7D	11/10/2022	14:49	36.42
WAP-8S	11/10/2022	13:32	31.58
WAP-8I	11/10/2022	13:40	31.75
WAP-8D	11/10/2022	13:47	33.93
WAP-9S	11/10/2022	13:00	40.76
WAP-9I	11/10/2022	13:07	42.33
WAP-9D	11/10/2022	13:15	46.10
Temporary Piezometers			
PZ-1	11/10/2022	12:03	16.84
PZ-2	11/10/2022	12:14	7.67
PZ-3	11/10/2022	11:34	11.40
PZ-4	11/10/2022	11:38	17.68
PZ-5	11/10/2022	12:10	3.96
PZ-6	11/10/2022	11:44	15.35
PZ-7	11/10/2022	11:47	16.07
PZ-8	11/10/2022	11:53	14.77
PZ-9	11/10/2022	11:56	18.30
PZ-10	11/10/2022	12:00	8.81

NOTES

DTW= Depth to Water TOC= Top of Casing

Test Date / Time: 11/22/2022 10:36:07 AM Project: Culley West Ash Pond (19)

Operator Name: Hayley Torres

Location Name: CCR-AP-7

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 20 ft Total Depth: 30 ft

Initial Depth to Water: 18.32 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 25 ft Estimated Total Volume Pumped:

1050 ml

Flow Cell Volume: 130 ml Final Flow Rate: 50 ml/min Final Draw Down: 0.21 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/22/2022 10:36 AM	00:00	7.16 pH	13.42 °C	670.05 μS/cm	0.66 mg/L	45.68 NTU	-82.1 mV	558.39 cm	50.00 ml/min
11/22/2022 10:39 AM	03:00	7.14 pH	13.52 °C	669.59 μS/cm	0.77 mg/L	31.23 NTU	-76.2 mV	558.39 cm	50.00 ml/min
11/22/2022 10:42 AM	06:00	7.15 pH	13.33 °C	663.42 μS/cm	0.89 mg/L	29.69 NTU	-76.0 mV	558.39 cm	50.00 ml/min
11/22/2022 10:45 AM	09:00	7.13 pH	13.71 °C	664.99 μS/cm	0.74 mg/L	52.69 NTU	-68.3 mV	558.39 cm	50.00 ml/min
11/22/2022 10:48 AM	12:00	7.12 pH	13.99 °C	664.61 μS/cm	0.63 mg/L	41.70 NTU	-58.8 mV	558.39 cm	50.00 ml/min
11/22/2022 10:51 AM	15:00	7.10 pH	14.28 °C	663.44 μS/cm	0.70 mg/L	17.19 NTU	-52.2 mV	558.39 cm	50.00 ml/min
11/22/2022 10:54 AM	18:00	7.10 pH	14.53 °C	662.48 μS/cm	0.65 mg/L	11.87 NTU	-52.5 mV	558.39 cm	50.00 ml/min
11/22/2022 10:57 AM	21:00	7.10 pH	14.34 °C	661.93 µS/cm	0.68 mg/L	18.26 NTU	-48.0 mV	558.39 cm	50.00 ml/min

Sample ID:	Description:
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Test Date / Time: 11/21/2022 3:53:06 PM Project: Culley West Ash Pond (18) 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: 38.37 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 51 ft
Estimated Total Volume Pumped:

2700 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/21/2022 3:53 PM	00:00	6.71 pH	16.19 °C	702.55 μS/cm	1.19 mg/L	0.00 NTU	71.0 mV	1,169.5 cm	100.00 ml/min
11/21/2022 3:56 PM	03:00	6.61 pH	16.19 °C	689.46 μS/cm	0.50 mg/L	3.06 NTU	84.1 mV	1,169.5 cm	100.00 ml/min
11/21/2022 3:59 PM	06:00	6.57 pH	16.24 °C	689.16 μS/cm	0.35 mg/L	4.76 NTU	88.8 mV	1,169.5 cm	100.00 ml/min
11/21/2022 4:02 PM	09:00	6.56 pH	16.23 °C	686.67 μS/cm	0.28 mg/L	6.44 NTU	91.6 mV	1,169.5 cm	100.00 ml/min
11/21/2022 4:05 PM	12:00	6.54 pH	16.19 °C	686.52 μS/cm	0.25 mg/L	6.27 NTU	93.6 mV	1,169.5 cm	100.00 ml/min
11/21/2022 4:08 PM	15:00	6.54 pH	16.16 °C	687.65 μS/cm	0.23 mg/L	6.60 NTU	94.8 mV	1,169.5 cm	100.00 ml/min
11/21/2022 4:11 PM	18:00	6.53 pH	16.22 °C	688.59 μS/cm	0.22 mg/L	4.08 NTU	95.5 mV	1,169.5 cm	100.00 ml/min
11/21/2022 4:14 PM	21:00	6.53 pH	16.18 °C	687.98 μS/cm	0.21 mg/L	4.05 NTU	96.0 mV	1,169.5 cm	100.00 ml/min
11/21/2022 4:17 PM	24:00	6.52 pH	16.16 °C	688.41 μS/cm	0.20 mg/L	4.17 NTU	96.5 mV	1,169.5 cm	100.00 ml/min
11/21/2022 4:20 PM	27:00	6.52 pH	16.13 °C	688.26 μS/cm	0.19 mg/L	1.29 NTU	96.6 mV	1,169.5 cm	100.00 ml/min

	Sample ID:	Description:
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Test Date / Time: 11/21/2022 10:52:08 AM Project: Culley West Ash Pond (14)

Operator Name: Hayley Torres

Location Name: WAP-3D
Well Diameter: 2 in
Screen Length: 10 ft
Top of Screen: 72.5 ft
Total Depth: 82.5 ft

Initial Depth to Water: 35.78 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 77.5 ft Estimated Total Volume Pumped:

2745 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.09 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/21/2022 10:52 AM	00:00	7.95 pH	10.17 °C	576.59 μS/cm	8.99 mg/L	0.57 NTU	58.7 mV	1,090.6 cm	100.00 ml/min
11/21/2022 10:55 AM	03:00	7.65 pH	9.99 °C	577.52 μS/cm	6.05 mg/L	0.00 NTU	46.4 mV	1,090.6 cm	100.00 ml/min
11/21/2022 10:58 AM	06:00	7.50 pH	10.19 °C	620.68 μS/cm	4.74 mg/L	0.00 NTU	-25.2 mV	1,090.6 cm	100.00 ml/min
11/21/2022 11:01 AM	09:27	7.45 pH	10.92 °C	712.36 µS/cm	3.30 mg/L	0.00 NTU	-10.0 mV	1,090.6 cm	100.00 ml/min
11/21/2022 11:04 AM	12:27	7.44 pH	10.78 °C	751.61 µS/cm	2.76 mg/L	0.00 NTU	6.1 mV	1,090.6 cm	100.00 ml/min
11/21/2022 11:07 AM	15:27	7.45 pH	10.63 °C	773.86 µS/cm	2.45 mg/L	0.00 NTU	17.2 mV	1,090.6 cm	100.00 ml/min
11/21/2022 11:10 AM	18:27	7.45 pH	10.44 °C	793.05 μS/cm	2.22 mg/L	0.00 NTU	26.6 mV	1,090.6 cm	100.00 ml/min
11/21/2022 11:13 AM	21:27	7.45 pH	10.28 °C	807.80 μS/cm	2.10 mg/L	0.00 NTU	32.5 mV	1,090.6 cm	100.00 ml/min
11/21/2022 11:16 AM	24:27	7.46 pH	10.17 °C	810.87 μS/cm	2.10 mg/L	0.00 NTU	36.9 mV	1,090.6 cm	100.00 ml/min
11/21/2022 11:19 AM	27:27	7.46 pH	10.06 °C	816.01 µS/cm	2.00 mg/L	0.00 NTU	39.0 mV	1,090.6 cm	100.00 ml/min

	Sample ID:	Description:
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Test Date / Time: 11/21/2022 12:03:39 PM Project: Culley West Ash Pond (15)

Operator Name: Hayley Torres

Location Name: WAP-3S

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 60 ft

Total Depth: 70 ft

Initial Depth to Water: 36.06 ft

Pump Type: Dedicated Tubing

Type: LDPE

Pump Intake From TOC: 65 ft Estimated Total Volume Pumped:

3135 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.27 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/21/2022 12:03 PM	00:00	7.63 pH	13.39 °C	501.62 μS/cm	7.64 mg/L	0.00 NTU	61.0 mV	1,099.1 cm	100.00 ml/min
11/21/2022 12:06 PM	03:00	7.50 pH	13.72 °C	553.95 μS/cm	4.29 mg/L	0.00 NTU	-1.7 mV	1,099.1 cm	100.00 ml/min
11/21/2022 12:09 PM	06:00	7.50 pH	14.38 °C	605.88 μS/cm	2.51 mg/L	6.58 NTU	11.2 mV	1,099.1 cm	100.00 ml/min
11/21/2022 12:12 PM	09:00	7.50 pH	14.83 °C	624.28 μS/cm	1.76 mg/L	10.36 NTU	14.2 mV	1,099.1 cm	100.00 ml/min
11/21/2022 12:15 PM	12:00	7.50 pH	15.09 °C	630.65 µS/cm	1.40 mg/L	6.35 NTU	12.8 mV	1,099.1 cm	100.00 ml/min
11/21/2022 12:18 PM	15:00	7.51 pH	15.29 °C	634.62 µS/cm	1.16 mg/L	5.27 NTU	10.5 mV	1,099.1 cm	100.00 ml/min
11/21/2022 12:21 PM	18:00	7.52 pH	15.19 °C	636.38 µS/cm	1.03 mg/L	5.65 NTU	7.3 mV	1,099.1 cm	100.00 ml/min
11/21/2022 12:24 PM	21:00	7.53 pH	15.51 °C	637.50 μS/cm	0.92 mg/L	2.60 NTU	3.7 mV	1,099.1 cm	100.00 ml/min
11/21/2022 12:27 PM	24:00	7.54 pH	15.51 °C	637.82 μS/cm	0.86 mg/L	0.55 NTU	0.8 mV	1,099.1 cm	100.00 ml/min
11/21/2022 12:31 PM	27:29	7.56 pH	15.19 °C	638.11 µS/cm	0.78 mg/L	0.35 NTU	-2.5 mV	1,099.1 cm	100.00 ml/min
11/21/2022 12:33 PM	30:09		15.22 °C	638.14 μS/cm	0.73 mg/L	0.00 NTU		1,099.1 cm	100.00 ml/min
11/21/2022 12:35 PM	31:21	7.59 pH	15.44 °C	638.88 µS/cm	0.72 mg/L	0.00 NTU	-7.5 mV	1,099.1 cm	100.00 ml/min

Sample ID:	Description:
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Test Date / Time: 11/17/2022 10:37:23 AM

Project: Culley West Ash Pond (6) **Operator Name:** Hayley Torres

Location Name: WAP-4D Well Diameter: 2 in

Casing Type: PVC Screen Length: 10 ft Top of Screen: 106 ft Total Depth: 116 ft

Initial Depth to Water: 29.12 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 111 ft Estimated Total Volume Pumped:

4500 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 1.9 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/17/2022 10:37 AM	00:00	7.45 pH	14.47 °C	283.46 μS/cm	1.25 mg/L	0.00 NTU	-36.6 mV	887.58 cm	100.00 ml/min
11/17/2022 10:40 AM	03:00	7.43 pH	15.07 °C	287.08 μS/cm	0.70 mg/L	0.00 NTU	-71.3 mV	887.58 cm	100.00 ml/min
11/17/2022 10:43 AM	06:00	7.40 pH	15.06 °C	287.73 μS/cm	0.54 mg/L	0.00 NTU	-81.2 mV	887.58 cm	100.00 ml/min
11/17/2022 10:46 AM	09:00	7.38 pH	15.42 °C	287.88 μS/cm	0.47 mg/L	0.00 NTU	-86.0 mV	887.58 cm	100.00 ml/min
11/17/2022 10:49 AM	12:00	7.40 pH	14.89 °C	287.83 μS/cm	0.46 mg/L	0.00 NTU	-81.5 mV	887.58 cm	100.00 ml/min
11/17/2022 10:52 AM	15:00	7.40 pH	13.94 °C	286.79 μS/cm	0.50 mg/L	0.00 NTU	-74.8 mV	887.58 cm	100.00 ml/min
11/17/2022 10:55 AM	18:00	7.41 pH	12.99 °C	286.07 μS/cm	0.64 mg/L	0.00 NTU	-71.8 mV	887.58 cm	100.00 ml/min
11/17/2022 10:58 AM	21:00	7.42 pH	12.12 °C	285.58 μS/cm	0.82 mg/L	0.00 NTU	-67.3 mV	887.58 cm	100.00 ml/min
11/17/2022 11:01 AM	24:00	7.43 pH	11.13 °C	283.81 μS/cm	1.06 mg/L	0.00 NTU	-62.0 mV	887.58 cm	100.00 ml/min
11/17/2022 11:04 AM	27:00	7.44 pH	10.27 °C	284.89 μS/cm	1.10 mg/L	0.00 NTU	-60.5 mV	887.58 cm	100.00 ml/min
11/17/2022 11:07 AM	30:00	7.45 pH	9.48 °C	283.87 μS/cm	1.11 mg/L	0.00 NTU	-56.6 mV	887.58 cm	100.00 ml/min
11/17/2022 11:10 AM	33:00	7.46 pH	8.62 °C	283.28 μS/cm	1.14 mg/L	0.00 NTU	-57.7 mV	887.58 cm	100.00 ml/min
11/17/2022 11:13 AM	36:00	7.47 pH	7.94 °C	283.54 μS/cm	1.32 mg/L	0.00 NTU	-58.5 mV	887.58 cm	100.00 ml/min
11/17/2022 11:16 AM	39:00	7.47 pH	7.50 °C	283.03 μS/cm	1.48 mg/L	0.00 NTU	-58.6 mV	887.58 cm	100.00 ml/min
11/17/2022 11:19 AM	42:00	7.47 pH	7.22 °C	284.80 μS/cm	1.56 mg/L	0.00 NTU	-59.3 mV	887.58 cm	100.00 ml/min

11/17/2022	45.00	7.46 ml l	7.05.00	285.68 µS/cm	1 F7 ma/l	0.00 NTU	60.0\/	007 F0 om	100 00 ml/min
11:22 AM	45:00	7.46 pH	7.25 °C	265.66 µ5/CIII	1.57 mg/L	0.00 N T O	-60.0 mV	887.58 cm	100.00 ml/min

Samples

Sample ID:	Description:
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Test Date / Time: 11/16/2022 3:47:55 PM Project: Culley West Ash Pond (5) Operator Name: Hayley Torres

Location Name: WAP-4I
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 65 ft
Total Depth: 75 ft

Initial Depth to Water: 29.36 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 70 ft Estimated Total Volume Pumped:

3300 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.2 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/16/2022 3:47 PM	00:00	7.28 pH	15.57 °C	241.88 μS/cm	2.27 mg/L	0.00 NTU	42.9 mV	894.89 cm	100.00 ml/min
11/16/2022 3:50 PM	03:00	7.21 pH	16.44 °C	266.20 μS/cm	0.83 mg/L	0.00 NTU	23.1 mV	894.89 cm	100.00 ml/min
11/16/2022 3:53 PM	06:00	7.17 pH	16.58 °C	268.58 μS/cm	0.53 mg/L	0.00 NTU	16.3 mV	894.89 cm	100.00 ml/min
11/16/2022 3:56 PM	09:00	7.15 pH	16.75 °C	269.15 μS/cm	0.42 mg/L	0.00 NTU	13.2 mV	894.89 cm	100.00 ml/min
11/16/2022 3:59 PM	12:00	7.12 pH	16.83 °C	269.21 μS/cm	0.36 mg/L	0.00 NTU	12.2 mV	894.89 cm	100.00 ml/min
11/16/2022 4:02 PM	15:00	7.11 pH	16.96 °C	269.10 μS/cm	0.33 mg/L	31.96 NTU	10.9 mV	894.89 cm	100.00 ml/min
11/16/2022 4:05 PM	18:00	7.09 pH	16.95 °C	269.21 μS/cm	0.30 mg/L	37.97 NTU	11.0 mV	894.89 cm	100.00 ml/min
11/16/2022 4:08 PM	21:00	7.09 pH	17.05 °C	269.15 μS/cm	0.28 mg/L	56.49 NTU	10.6 mV	894.89 cm	100.00 ml/min
11/16/2022 4:11 PM	24:00	7.07 pH	17.04 °C	269.16 μS/cm	0.27 mg/L	24.62 NTU	10.9 mV	894.89 cm	100.00 ml/min
11/16/2022 4:14 PM	27:00	7.07 pH	17.06 °C	268.99 μS/cm	0.26 mg/L	7.88 NTU	10.5 mV	894.89 cm	100.00 ml/min
11/16/2022 4:17 PM	30:00	7.06 pH	17.07 °C	268.89 μS/cm	0.26 mg/L	2.00 NTU	10.9 mV	894.89 cm	100.00 ml/min
11/16/2022 4:20 PM	33:00	7.06 pH	17.15 °C	269.13 μS/cm	0.25 mg/L	0.01 NTU	10.4 mV	894.89 cm	100.00 ml/min

Sample ID:	Description:
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Test Date / Time: 11/16/2022 2:02:41 PM Project: Culley West Ash Pond (4) Operator Name: Hayley Torres

Location Name: WAP-4S
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 35 ft
Total Depth: 45 ft

Initial Depth to Water: 29.88 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 40 ft Estimated Total Volume Pumped:

6900 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		./ 0.4	./ 0.5	,	+/- 10 %	./ 40	./ 40		
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/16/2022 2:02 PM	00:00	6.95 pH	15.66 °C	1,220.8	0.76 mg/L	1,575.3 NTU	0.0 mV	910.74 cm	100.00 ml/min
				μS/cm					
11/16/2022 2:05 PM	03:00	6.97 pH	15.62 °C	1,222.3 μS/cm	0.54 mg/L	1,605.0 NTU	-4.3 mV	910.74 cm	100.00 ml/min
11/16/2022 2:08 PM	06:00	6.97 pH	15.60 °C	1,220.5 μS/cm	0.43 mg/L	1,654.4 NTU	-6.7 mV	910.74 cm	100.00 ml/min
11/16/2022 2:11 PM	09:00	7.00 pH	15.57 °C	1,216.7 μS/cm	1.18 mg/L	900.12 NTU	-7.0 mV	910.74 cm	100.00 ml/min
11/16/2022 2:14 PM	12:00	6.99 pH	15.60 °C	1,210.2 μS/cm	0.35 mg/L	1,014.6 NTU	-12.1 mV	910.74 cm	100.00 ml/min
11/16/2022 2:17 PM	15:00	7.00 pH	15.69 °C	1,205.2 μS/cm	0.28 mg/L	945.71 NTU	-15.3 mV	910.74 cm	100.00 ml/min
11/16/2022 2:20 PM	18:00	7.01 pH	15.67 °C	1,196.7 μS/cm	0.24 mg/L	840.70 NTU	-18.9 mV	910.74 cm	100.00 ml/min
11/16/2022 2:23 PM	21:00	7.01 pH	15.63 °C	1,192.6 μS/cm	0.22 mg/L	681.33 NTU	-21.2 mV	910.74 cm	100.00 ml/min
11/16/2022 2:26 PM	24:00	7.02 pH	15.67 °C	1,187.8 μS/cm	0.20 mg/L	2,781.4 NTU	-22.9 mV	910.74 cm	100.00 ml/min
11/16/2022 2:29 PM	27:00	7.01 pH	15.77 °C	1,186.5 μS/cm	0.17 mg/L	756.08 NTU	-24.3 mV	910.74 cm	100.00 ml/min
11/16/2022 2:32 PM	30:00	7.01 pH	15.72 °C	1,189.2 μS/cm	0.15 mg/L	445.62 NTU	-25.7 mV	910.74 cm	100.00 ml/min
11/16/2022 2:35 PM	33:00	7.01 pH	15.71 °C	1,189.4 μS/cm	0.14 mg/L	97.97 NTU	-26.2 mV	910.74 cm	100.00 ml/min
11/16/2022 2:38 PM	36:00	7.01 pH	15.73 °C	1,192.5 μS/cm	0.14 mg/L	180.34 NTU	-26.8 mV	910.74 cm	100.00 ml/min
11/16/2022 2:41 PM	39:00	7.01 pH	15.70 °C	1,195.4 μS/cm	0.14 mg/L	83.66 NTU	-27.1 mV	910.74 cm	100.00 ml/min
11/16/2022 2:44 PM	42:00	7.01 pH	15.65 °C	1,204.5 μS/cm	0.13 mg/L	97.35 NTU	-26.7 mV	910.74 cm	100.00 ml/min

11/16/2022	45:00	7.00 pH	15.65 °C	1,219.1	0.13 mg/L	83.94 NTU	-25.5 mV	910.74 cm	100.00 ml/min
2:47 PM	45.00	7.00 pH	15.65 C	μS/cm	0.13 Hig/L	65.94 NTO	-25.5 1117	910.74 CIII	100.00 1111/111111
11/16/2022	48:00	6.99 pH	15.62 °C	1,226.0	0.12 mg/L	49.37 NTU	-24.5 mV	910.74 cm	100.00 ml/min
2:50 PM	48.00	0.99 pm		μS/cm	0.12 mg/L	49.37 1110	-24.5 1117	910.74 CIII	100.00 1111/111111
11/16/2022	51:00	6.99 pH	15.58 °C	1,233.2	0.12 mg/L	42.38 NTU	-23.4 mV	910.74 cm	100.00 ml/min
2:53 PM	31.00	0.55 pri	13.30 0	μS/cm	0.12 mg/L		20.41111	310.74 6111	100.00 111/111111
11/16/2022	54:00	6.99 pH	15.61 °C	1,232.4	0.12 mg/L	58.07 NTU	-23.4 mV	910.74 cm	100.00 ml/min
2:56 PM	04.00	0.00 pri	13.01 0	μS/cm	0.12 mg/L	30.07 1110		310.74 6111	
11/16/2022	57:00	7.00 pH	15.53 °C	1,231.2	0.64 mg/L	33.30 NTU	-14.0 mV	910.74 cm	100.00 ml/min
2:59 PM	57.00	7.00 pm	10.00	μS/cm	0.0 ·g/ =	00.001110	14.01111	310.74 0111	100100 1111,111111
11/16/2022	01:00:00	0:00 6.99 pH	15.52 °C	1,228.4	0.12 mg/L	24.22 NTU	-19.4 mV	910.74 cm	100.00 ml/min
3:02 PM	01.00.00	0.00 pri		μS/cm	0.12 mg/L	24.22 1010	13.4111	310.74 6111	100.00 111/111111
11/16/2022	01:03:00	6.99 pH	15.55 °C	1,228.7	0.11 mg/L	29.21 NTU	-21.3 mV	910.74 cm	100.00 ml/min
3:05 PM	01.00.00	0.55 pri	13.33 0	μS/cm	0.11 mg/L	25.211110	21.51117	310.74 6111	100.00 1111/111111
11/16/2022	01:06:00	6.99 pH	15.49 °C	1,227.9	0.12 mg/L	53.55 NTU	-21.8 mV	910.74 cm	100.00 ml/min
3:08 PM	01.00.00	0.99 pri 13.49 C	μS/cm	0.12 mg/L	00.001110	21.01111	910.74 Cm	100.00 111/111111	
11/16/2022	01:09:00	6.99 pH	15.48 °C	1,228.2	0.12 mg/L	37.13 NTU	-21.8 mV	910.74 cm	100.00 ml/min
3:11 PM	01.09.00	0.55 pri		μS/cm		37.131110	21.0111	310.74 6111	100.00 111/111111

Samples

Sample ID:	Description:
Sample ID.	Description.

Test Date / Time: 11/16/2022 12:35:20 PM

Project: Culley West Ash Pond (3) **Operator Name:** Hayley Torres

Location Name: WAP-5D

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103 ft Total Depth: 113 ft

Initial Depth to Water: 29.06 ft

Pump Type: Dedicated Tubing

Type: LDPE

Pump Intake From TOC: 108 ft Estimated Total Volume Pumped:

3033.333 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.06 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/16/2022 12:35 PM	00:00	7.08 pH	17.82 °C	276.96 μS/cm	0.99 mg/L	0.19 NTU	17.0 mV	885.75 cm	100.00 ml/min
11/16/2022 12:38 PM	03:00	7.09 pH	17.48 °C	276.89 μS/cm	0.67 mg/L	12.48 NTU	-33.0 mV	885.75 cm	100.00 ml/min
11/16/2022 12:41 PM	06:00	7.11 pH	17.54 °C	277.32 μS/cm	0.52 mg/L	7.68 NTU	-49.1 mV	885.75 cm	100.00 ml/min
11/16/2022 12:44 PM	09:00	7.11 pH	17.57 °C	277.26 μS/cm	0.43 mg/L	4.41 NTU	-55.2 mV	885.75 cm	100.00 ml/min
11/16/2022 12:47 PM	12:00	7.12 pH	17.38 °C	277.35 μS/cm	0.38 mg/L	3.48 NTU	-58.3 mV	885.75 cm	100.00 ml/min
11/16/2022 12:50 PM	15:00	7.11 pH	17.72 °C	277.41 μS/cm	0.33 mg/L	23.23 NTU	-61.9 mV	885.75 cm	100.00 ml/min
11/16/2022 12:53 PM	18:00	7.11 pH	17.85 °C	277.61 μS/cm	0.31 mg/L	3.41 NTU	-63.3 mV	885.75 cm	100.00 ml/min
11/16/2022 12:56 PM	21:20	7.12 pH	17.88 °C	277.56 μS/cm	0.29 mg/L	1.10 NTU	-65.9 mV	885.75 cm	100.00 ml/min
11/16/2022 12:59 PM	24:20	7.11 pH	18.01 °C	277.38 μS/cm	0.27 mg/L	3.00 NTU	-66.5 mV	885.75 cm	100.00 ml/min
11/16/2022 1:02 PM	27:20	7.12 pH	17.98 °C	277.15 μS/cm	0.26 mg/L	0.00 NTU	-69.0 mV	885.75 cm	100.00 ml/min
11/16/2022 1:05 PM	30:20	7.12 pH	17.69 °C	275.52 μS/cm	0.25 mg/L	3.64 NTU	-69.3 mV	885.75 cm	100.00 ml/min

Sample ID:	Description:
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Test Date / Time: 11/16/2022 11:25:25 AM

Project: Culley West Ash Pond (2) **Operator Name:** Hayley Torres

Location Name: WAP-5I
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 65 ft
Total Depth: 75 ft

Initial Depth to Water: 28.62 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 70 ft Estimated Total Volume Pumped:

2400 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.17 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/16/2022 11:25 AM	00:00	7.08 pH	17.02 °C	264.74 μS/cm	1.18 mg/L	60.66 NTU	27.0 mV	872.34 cm	100.00 ml/min
11/16/2022 11:28 AM	03:00	7.09 pH	16.82 °C	267.72 μS/cm	0.67 mg/L	11.72 NTU	14.3 mV	872.34 cm	100.00 ml/min
11/16/2022 11:31 AM	06:00	7.06 pH	16.94 °C	268.81 μS/cm	0.47 mg/L	0.10 NTU	9.1 mV	872.34 cm	100.00 ml/min
11/16/2022 11:34 AM	09:00	7.06 pH	16.92 °C	269.30 μS/cm	0.37 mg/L	13.40 NTU	6.2 mV	872.34 cm	100.00 ml/min
11/16/2022 11:37 AM	12:00	7.05 pH	16.95 °C	269.53 μS/cm	0.32 mg/L	7.68 NTU	4.7 mV	872.34 cm	100.00 ml/min
11/16/2022 11:40 AM	15:00	7.03 pH	17.03 °C	269.68 μS/cm	0.29 mg/L	14.25 NTU	3.4 mV	872.34 cm	100.00 ml/min
11/16/2022 11:43 AM	18:00	7.04 pH	16.97 °C	269.69 μS/cm	0.27 mg/L	25.02 NTU	2.6 mV	872.34 cm	100.00 ml/min
11/16/2022 11:46 AM	21:00	7.02 pH	17.18 °C	269.89 μS/cm	0.26 mg/L	17.77 NTU	2.4 mV	872.34 cm	100.00 ml/min
11/16/2022 11:49 AM	24:00	7.03 pH	17.00 °C	269.56 μS/cm	0.25 mg/L	24.66 NTU	1.5 mV	872.34 cm	100.00 ml/min

Sample ID:	Description:
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Test Date / Time: 11/16/2022 10:18:41 AM

Project: Culley West Ash Pond **Operator Name:** Hayley Torres

Location Name: WAP-5S

Well Diameter: 2 in Casing Type: PVC

Screen Length: 10 ft Top of Screen: 30 ft Total Depth: 40 ft

Initial Depth to Water: 29.02 ft

Pump Type: Dedicated Tubing Type: LDPE

Estimated Total Volume Pumped:

4200 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.07 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/16/2022 10:18 AM	00:00	6.70 pH	14.65 °C	1,185.2 μS/cm	2.47 mg/L	0.00 NTU	44.5 mV	884.53 cm	100.00 ml/min
11/16/2022 10:21 AM	03:00	6.62 pH	14.73 °C	1,185.9 μS/cm	2.03 mg/L	0.00 NTU	45.2 mV	884.53 cm	100.00 ml/min
11/16/2022 10:24 AM	06:00	6.55 pH	15.60 °C	1,190.4 μS/cm	1.59 mg/L	0.00 NTU	44.9 mV	884.53 cm	100.00 ml/min
11/16/2022 10:27 AM	09:00	6.52 pH	15.76 °C	1,188.7 μS/cm	1.11 mg/L	0.00 NTU	43.3 mV	884.53 cm	100.00 ml/min
11/16/2022 10:30 AM	12:00	6.50 pH	15.75 °C	1,188.3 μS/cm	0.84 mg/L	0.00 NTU	41.5 mV	884.53 cm	100.00 ml/min
11/16/2022 10:33 AM	15:00	6.49 pH	16.01 °C	1,188.2 μS/cm	0.72 mg/L	0.00 NTU	41.8 mV	884.53 cm	100.00 ml/min
11/16/2022 10:36 AM	18:00	6.48 pH	16.07 °C	1,186.5 μS/cm	0.63 mg/L	0.00 NTU	40.3 mV	884.53 cm	100.00 ml/min
11/16/2022 10:39 AM	21:00	6.48 pH	16.01 °C	1,186.7 μS/cm	0.57 mg/L	0.00 NTU	39.6 mV	884.53 cm	100.00 ml/min
11/16/2022 10:42 AM	24:00	6.48 pH	16.18 °C	1,187.2 μS/cm	0.52 mg/L	0.00 NTU	39.2 mV	884.53 cm	100.00 ml/min
11/16/2022 10:45 AM	27:00	6.48 pH	16.40 °C	1,188.0 μS/cm	0.48 mg/L	0.00 NTU	38.7 mV	884.53 cm	100.00 ml/min
11/16/2022 10:48 AM	30:00	6.48 pH	16.34 °C	1,185.8 μS/cm	0.46 mg/L	0.00 NTU	37.6 mV	884.53 cm	100.00 ml/min
11/16/2022 10:51 AM	33:00	6.48 pH	16.59 °C	1,187.4 μS/cm	0.43 mg/L	0.00 NTU	37.0 mV	884.53 cm	100.00 ml/min
11/16/2022 10:54 AM	36:00	6.48 pH	16.35 °C	1,185.1 μS/cm	0.40 mg/L	0.00 NTU	37.2 mV	884.53 cm	100.00 ml/min
11/16/2022 10:57 AM	39:00	6.48 pH	16.45 °C	1,185.4 μS/cm	0.37 mg/L	0.00 NTU	36.4 mV	884.53 cm	100.00 ml/min
11/16/2022 11:00 AM	42:00	6.49 pH	16.51 °C	1,184.8 μS/cm	0.37 mg/L	0.00 NTU	35.9 mV	884.53 cm	100.00 ml/min

Samples

Sample ID:	Description:
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Test Date / Time: 11/17/2022 2:30:37 PM Project: Culley West Ash Pond (9) Operator Name: Hayley Torres

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: 38.89 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 110 ft Estimated Total Volume Pumped:

3000 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.25 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/17/2022 2:30 PM	00:00	7.53 pH	13.70 °C	252.08 μS/cm	6.70 mg/L	0.00 NTU	83.4 mV	1,185.4 cm	100.00 ml/min
11/17/2022 2:33 PM	03:00	7.38 pH	13.17 °C	251.99 μS/cm	4.69 mg/L	0.00 NTU	84.1 mV	1,185.4 cm	100.00 ml/min
11/17/2022 2:36 PM	06:00	7.31 pH	13.02 °C	252.05 μS/cm	3.92 mg/L	0.00 NTU	82.7 mV	1,185.4 cm	100.00 ml/min
11/17/2022 2:39 PM	09:00	7.28 pH	13.12 °C	251.73 μS/cm	3.45 mg/L	0.00 NTU	47.4 mV	1,185.4 cm	100.00 ml/min
11/17/2022 2:42 PM	12:00	7.28 pH	13.23 °C	252.00 μS/cm	3.46 mg/L	0.00 NTU	6.2 mV	1,185.4 cm	100.00 ml/min
11/17/2022 2:45 PM	15:00	7.29 pH	13.23 °C	253.09 μS/cm	3.05 mg/L	0.00 NTU	-15.2 mV	1,185.4 cm	100.00 ml/min
11/17/2022 2:48 PM	18:00	7.30 pH	13.23 °C	254.01 μS/cm	2.51 mg/L	0.00 NTU	-28.9 mV	1,185.4 cm	100.00 ml/min
11/17/2022 2:51 PM	21:00	7.31 pH	13.34 °C	255.57 μS/cm	2.32 mg/L	0.00 NTU	-36.6 mV	1,185.4 cm	100.00 ml/min
11/17/2022 2:54 PM	24:00	7.32 pH	13.59 °C	257.20 μS/cm	2.22 mg/L	0.00 NTU	-39.9 mV	1,185.4 cm	100.00 ml/min
11/17/2022 2:57 PM	27:00	7.32 pH	13.62 °C	258.59 μS/cm	2.10 mg/L	0.00 NTU	-40.5 mV	1,185.4 cm	100.00 ml/min
11/17/2022 3:00 PM	30:00	7.33 pH	13.54 °C	258.97 μS/cm	2.05 mg/L	0.00 NTU	-44.6 mV	1,185.4 cm	100.00 ml/min

Sample ID:	Description:
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Test Date / Time: 11/17/2022 12:15:39 PM

Project: Culley West Ash Pond (7) **Operator Name:** Hayley Torres

Location Name: WAP-6I

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 70 ft

Total Depth: 80 ft

Initial Depth to Water: 33.85 ft

Pump Type: Dedicated Tubing

Type: LDPE

Pump Intake From TOC: 75 ft Estimated Total Volume Pumped:

2400 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.5 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/17/2022 12:15 PM	00:00	7.30 pH	12.58 °C	239.60 μS/cm	6.03 mg/L	0.00 NTU	71.3 mV	1,031.7 cm	100.00 ml/min
11/17/2022 12:18 PM	03:00	7.24 pH	12.28 °C	240.51 μS/cm	4.37 mg/L	0.00 NTU	60.2 mV	1,031.7 cm	100.00 ml/min
11/17/2022 12:21 PM	06:00	7.21 pH	12.55 °C	245.95 μS/cm	3.84 mg/L	0.00 NTU	50.2 mV	1,031.7 cm	100.00 ml/min
11/17/2022 12:24 PM	09:00	7.22 pH	12.63 °C	249.85 μS/cm	3.67 mg/L	0.00 NTU	44.3 mV	1,031.7 cm	100.00 ml/min
11/17/2022 12:27 PM	12:00	7.23 pH	12.12 °C	253.43 μS/cm	3.36 mg/L	0.00 NTU	39.3 mV	1,031.7 cm	100.00 ml/min
11/17/2022 12:30 PM	15:00	7.24 pH	11.53 °C	255.25 μS/cm	3.13 mg/L	0.00 NTU	35.2 mV	1,031.7 cm	100.00 ml/min
11/17/2022 12:33 PM	18:00	7.25 pH	11.17 °C	259.26 μS/cm	2.85 mg/L	0.00 NTU	31.6 mV	1,031.7 cm	100.00 ml/min
11/17/2022 12:36 PM	21:00	7.26 pH	11.26 °C	263.73 μS/cm	2.82 mg/L	0.00 NTU	28.6 mV	1,031.7 cm	100.00 ml/min
11/17/2022 12:39 PM	24:00	7.26 pH	11.29 °C	265.14 μS/cm	2.83 mg/L	0.00 NTU	27.6 mV	1,031.7 cm	100.00 ml/min

Sample ID:	Description:
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Test Date / Time: 11/17/2022 1:12:06 PM Project: Culley West Ash Pond (8) Operator Name: Hayley Torres

Location Name: WAP-6S

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 40 ft

Total Depth: 50 ft

Initial Depth to Water: 33.26 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 45 ft Estimated Total Volume Pumped:

3600 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.38 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/17/2022 1:12 PM	00:00	6.82 pH	13.85 °C	578.91 μS/cm	5.20 mg/L	19.99 NTU	81.0 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:15 PM	03:00	6.82 pH	13.76 °C	583.11 μS/cm	3.27 mg/L	45.23 NTU	46.5 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:18 PM	06:00	6.81 pH	15.19 °C	581.94 μS/cm	1.94 mg/L	53.29 NTU	30.2 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:21 PM	09:00	6.81 pH	15.08 °C	577.93 μS/cm	1.18 mg/L	51.62 NTU	21.2 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:24 PM	12:00	6.83 pH	15.11 °C	574.59 μS/cm	0.80 mg/L	46.55 NTU	16.1 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:27 PM	15:00	6.84 pH	14.95 °C	571.85 μS/cm	0.70 mg/L	42.96 NTU	13.7 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:30 PM	18:00	6.86 pH	15.03 °C	568.05 μS/cm	0.62 mg/L	26.20 NTU	11.8 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:33 PM	21:00	6.87 pH	14.97 °C	564.09 μS/cm	0.58 mg/L	21.73 NTU	11.0 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:36 PM	24:00	6.89 pH	15.13 °C	558.98 μS/cm	0.54 mg/L	18.36 NTU	9.3 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:39 PM	27:00	6.90 pH	14.98 °C	557.47 μS/cm	0.47 mg/L	10.47 NTU	8.2 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:42 PM	30:00	6.91 pH	15.09 °C	550.66 μS/cm	0.43 mg/L	8.84 NTU	6.7 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:45 PM	33:00	6.92 pH	15.17 °C	547.94 μS/cm	0.41 mg/L	12.02 NTU	5.9 mV	1,013.8 cm	100.00 ml/min
11/17/2022 1:48 PM	36:00	6.93 pH	15.01 °C	544.89 μS/cm	0.40 mg/L	4.24 NTU	4.9 mV	1,013.8 cm	100.00 ml/min

Sample ID:	Description:
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Test Date / Time: 11/28/2022 1:02:22 PM **Project:** CULLEY WEST NOV 2022 GWM (3)

Operator Name: Mark Breting

Location Name: WAP-6S

Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 40 ft

Total Depth: 50 ft

Initial Depth to Water: 34.03 ft

Pump Type: Dedicated pump

Tubing Type: TLPE

Pump Intake From TOC: 45 ft Estimated Total Volume Pumped:

7500 ml

Flow Cell Volume: 130 ml Final Flow Rate: 250 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 707286

Test Notes:

Weather Conditions:

Cloudy 48 degrees

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 5	
11/28/2022 1:02 PM	00:00	7.37 pH	15.47 °C	551.99 μS/cm	4.27 mg/L	30.12 NTU	-86.2 mV	1,037.2 cm	250.00 ml/min
11/28/2022 1:05 PM	03:00	7.23 pH	15.42 °C	562.49 μS/cm	0.53 mg/L	52.01 NTU	-70.5 mV	1,037.2 cm	250.00 ml/min
11/28/2022 1:08 PM	06:00	7.30 pH	15.42 °C	554.59 μS/cm	0.33 mg/L	21.50 NTU	-69.0 mV	1,037.2 cm	250.00 ml/min
11/28/2022 1:11 PM	09:00	7.22 pH	15.39 °C	550.77 μS/cm	0.26 mg/L	14.47 NTU	-61.7 mV	1,037.2 cm	250.00 ml/min
11/28/2022 1:14 PM	12:00	7.30 pH	15.40 °C	542.41 μS/cm	0.22 mg/L	5.94 NTU	-62.9 mV	1,037.2 cm	250.00 ml/min
11/28/2022 1:17 PM	15:00	7.33 pH	15.38 °C	536.86 μS/cm	0.19 mg/L	5.69 NTU	-61.6 mV	1,037.2 cm	250.00 ml/min
11/28/2022 1:20 PM	18:00	7.31 pH	15.40 °C	533.52 μS/cm	0.17 mg/L	2.69 NTU	-58.9 mV	1,037.2 cm	250.00 ml/min
11/28/2022 1:23 PM	21:00	7.35 pH	15.36 °C	522.50 μS/cm	0.15 mg/L	1.62 NTU	-58.6 mV	1,037.2 cm	250.00 ml/min
11/28/2022 1:26 PM	24:00	7.32 pH	15.38 °C	523.19 μS/cm	0.13 mg/L	6.32 NTU	-55.6 mV	1,037.2 cm	250.00 ml/min
11/28/2022 1:29 PM	27:00	7.35 pH	15.37 °C	518.33 μS/cm	0.13 mg/L	0.44 NTU	-55.8 mV	1,037.2 cm	250.00 ml/min
11/28/2022 1:32 PM	30:00	7.31 pH	15.34 °C	516.07 μS/cm	0.13 mg/L	0.69 NTU	-52.5 mV	1,037.2 cm	250.00 ml/min

Sample ID:	Description:
WAP-6S	

Test Date / Time: 11/21/2022 2:18:27 PM Project: Culley West Ash Pond (17) Operator Name: Hayley Torres

Location Name: WAP-7D
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 68.5 ft

Total Depth: 78.5 ft

Initial Depth to Water: 36.03 ft

Pump Type: Dedicated Tubing

Type: LDPE

Pump Intake From TOC: 73.5 ft Estimated Total Volume Pumped:

3000 ml

Flow Cell Volume: 130 ml Final

Flow Rate: 100 ml/min Final Draw Down: 0.1 ft

Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/21/2022 2:18 PM	00:00	7.87 pH	16.20 °C	1,656.7 μS/cm	4.60 mg/L	0.00 NTU	-1.0 mV	1,098.2 cm	100.00 ml/min
11/21/2022 2:21 PM	03:00	7.51 pH	16.27 °C	1,680.2 μS/cm	1.48 mg/L	0.00 NTU	-57.3 mV	1,098.2 cm	100.00 ml/min
11/21/2022 2:24 PM	06:00	7.39 pH	16.35 °C	1,683.8 μS/cm	0.85 mg/L	0.00 NTU	-57.3 mV	1,098.2 cm	100.00 ml/min
11/21/2022 2:27 PM	09:00	7.34 pH	16.36 °C	1,685.2 μS/cm	0.62 mg/L	0.00 NTU	-53.4 mV	1,098.2 cm	100.00 ml/min
11/21/2022 2:30 PM	12:00	7.31 pH	16.31 °C	1,685.7 μS/cm	0.51 mg/L	0.00 NTU	-50.3 mV	1,098.2 cm	100.00 ml/min
11/21/2022 2:33 PM	15:00	7.29 pH	16.33 °C	1,684.9 μS/cm	0.43 mg/L	0.00 NTU	-48.5 mV	1,098.2 cm	100.00 ml/min
11/21/2022 2:36 PM	18:00	7.28 pH	16.35 °C	1,687.1 μS/cm	0.39 mg/L	0.00 NTU	-47.0 mV	1,098.2 cm	100.00 ml/min
11/21/2022 2:39 PM	21:00	7.27 pH	16.31 °C	1,684.4 μS/cm	0.36 mg/L	0.00 NTU	-45.8 mV	1,098.2 cm	100.00 ml/min
11/21/2022 2:42 PM	24:00	7.26 pH	16.20 °C	1,684.0 μS/cm	0.34 mg/L	0.00 NTU	-44.8 mV	1,098.2 cm	100.00 ml/min
11/21/2022 2:45 PM	27:00	7.26 pH	16.34 °C	1,683.7 μS/cm	0.32 mg/L	0.00 NTU	-44.3 mV	1,098.2 cm	100.00 ml/min
11/21/2022 2:48 PM	30:00	7.25 pH	16.23 °C	1,683.0 μS/cm	0.31 mg/L	0.00 NTU	-43.5 mV	1,098.2 cm	100.00 ml/min

Sample ID: Description:

Test Date / Time: 11/21/2022 1:12:05 PM Project: Culley West Ash Pond (16) Operator Name: Hayley Torres

Location Name: WAP-7S Well Diameter: 2 in Casing Type: PVC

Screen Length: 10 ft Top of Screen: 50 ft Total Depth: 60 ft

Initial Depth to Water: 36.51 ft

Pump Type: Dedicated Tubing

Type: LDPE

Pump Intake From TOC: 55 ft Estimated Total Volume Pumped:

3600 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.1 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/21/2022 1:12 PM	00:00	9.18 pH	16.09 °C	790.44 μS/cm	5.18 mg/L	0.00 NTU	37.0 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:15 PM	03:00	9.90 pH	16.12 °C	799.88 μS/cm	2.49 mg/L	0.00 NTU	14.6 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:18 PM	06:00	10.13 pH	16.24 °C	804.18 μS/cm	1.77 mg/L	0.00 NTU	2.3 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:21 PM	09:00	10.25 pH	16.25 °C	807.72 μS/cm	1.37 mg/L	0.00 NTU	-5.5 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:24 PM	12:00	10.35 pH	16.30 °C	809.91 μS/cm	1.11 mg/L	0.00 NTU	-11.5 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:27 PM	15:00	10.42 pH	16.37 °C	812.49 μS/cm	0.95 mg/L	0.00 NTU	-15.9 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:30 PM	18:00	10.47 pH	16.46 °C	813.56 µS/cm	0.82 mg/L	0.00 NTU	-19.4 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:33 PM	21:00	10.49 pH	16.52 °C	814.39 μS/cm	0.74 mg/L	0.00 NTU	-21.6 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:36 PM	24:00	10.52 pH	16.43 °C	814.03 μS/cm	0.67 mg/L	0.00 NTU	-23.5 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:39 PM	27:00	10.54 pH	16.34 °C	815.15 μS/cm	0.64 mg/L	0.00 NTU	-25.2 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:42 PM	30:00	10.56 pH	16.31 °C	811.72 μS/cm	0.60 mg/L	0.00 NTU	-26.2 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:45 PM	33:00	10.57 pH	16.34 °C	814.93 μS/cm	0.57 mg/L	0.00 NTU	-27.2 mV	1,112.8 cm	100.00 ml/min
11/21/2022 1:48 PM	36:00	10.57 pH	16.46 °C	814.82 µS/cm	0.55 mg/L	0.00 NTU	-28.0 mV	1,112.8 cm	100.00 ml/min

Sample ID:	Description:
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Test Date / Time: 11/18/2022 12:40:02 PM Project: Culley West Ash Pond (12)

Operator Name: Hayley Torres

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: 33.42 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 102 ft Estimated Total Volume Pumped:

4200 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.1 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/18/2022 12:40 PM	00:00	7.28 pH	15.88 °C	282.79 μS/cm	4.52 mg/L	0.00 NTU	75.6 mV	1,018.6 cm	100.00 ml/min
11/18/2022 12:43 PM	03:00	7.32 pH	15.30 °C	269.34 μS/cm	1.09 mg/L	0.00 NTU	-27.5 mV	1,018.6 cm	100.00 ml/min
11/18/2022 12:46 PM	06:00	7.31 pH	15.43 °C	258.68 μS/cm	0.54 mg/L	0.00 NTU	-66.8 mV	1,018.6 cm	100.00 ml/min
11/18/2022 12:49 PM	09:00	7.30 pH	15.25 °C	255.95 μS/cm	0.28 mg/L	0.00 NTU	-80.1 mV	1,018.6 cm	100.00 ml/min
11/18/2022 12:52 PM	12:00	7.30 pH	15.14 °C	255.46 μS/cm	0.20 mg/L	0.00 NTU	-86.3 mV	1,018.6 cm	100.00 ml/min
11/18/2022 12:55 PM	15:00	7.29 pH	15.24 °C	255.55 μS/cm	0.17 mg/L	0.00 NTU	-89.9 mV	1,018.6 cm	100.00 ml/min
11/18/2022 12:58 PM	18:00	7.30 pH	15.35 °C	255.31 μS/cm	0.15 mg/L	0.00 NTU	-92.5 mV	1,018.6 cm	100.00 ml/min
11/18/2022 1:01 PM	21:00	7.30 pH	15.06 °C	254.36 μS/cm	0.14 mg/L	0.00 NTU	-94.1 mV	1,018.6 cm	100.00 ml/min
11/18/2022 1:04 PM	24:00	7.30 pH	15.18 °C	255.11 μS/cm	0.13 mg/L	0.00 NTU	-95.5 mV	1,018.6 cm	100.00 ml/min
11/18/2022 1:07 PM	27:00	7.30 pH	14.95 °C	254.60 μS/cm	0.12 mg/L	0.00 NTU	-96.4 mV	1,018.6 cm	100.00 ml/min
11/18/2022 1:10 PM	30:00	7.30 pH	15.16 °C	255.16 μS/cm	0.11 mg/L	0.00 NTU	-97.2 mV	1,018.6 cm	100.00 ml/min
11/18/2022 1:13 PM	33:00	7.30 pH	15.09 °C	254.82 μS/cm	0.11 mg/L	0.00 NTU	-98.0 mV	1,018.6 cm	100.00 ml/min
11/18/2022 1:16 PM	36:00	7.30 pH	15.24 °C	255.24 μS/cm	0.10 mg/L	0.00 NTU	-98.6 mV	1,018.6 cm	100.00 ml/min
11/18/2022 1:19 PM	39:00	7.30 pH	15.17 °C	255.22 μS/cm	0.10 mg/L	0.00 NTU	-99.2 mV	1,018.6 cm	100.00 ml/min
11/18/2022 1:22 PM	42:00	7.30 pH	15.20 °C	255.09 μS/cm	0.09 mg/L	0.00 NTU	-99.4 mV	1,018.6 cm	100.00 ml/min

Samples

Sample ID:	Description:
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Test Date / Time: 11/18/2022 11:09:04 AM

Project: Culley West Ash Pond (11) **Operator Name:** Hayley Torres

Location Name: WAP-8I
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 70 ft

Total Depth: 80 ft Initial Depth to Water: 31.35 ft Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 75 ft Estimated Total Volume Pumped:

4061.667 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.08 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/18/2022 11:09 AM	00:00	7.41 pH	13.35 °C	288.77 μS/cm	2.29 mg/L	222.94 NTU	8.5 mV	955.55 cm	100.00 ml/min
11/18/2022 11:12 AM	03:00	7.35 pH	13.53 °C	291.76 μS/cm	1.95 mg/L	139.86 NTU	-2.0 mV	955.55 cm	100.00 ml/min
11/18/2022 11:15 AM	06:00	7.32 pH	13.88 °C	293.99 μS/cm	1.49 mg/L	131.71 NTU	-12.5 mV	955.55 cm	100.00 ml/min
11/18/2022 11:18 AM	09:00	7.29 pH	14.47 °C	294.08 μS/cm	1.18 mg/L	85.12 NTU	-16.2 mV	955.55 cm	100.00 ml/min
11/18/2022 11:21 AM	12:00	7.27 pH	14.72 °C	294.95 μS/cm	0.96 mg/L	118.37 NTU	-18.7 mV	955.55 cm	100.00 ml/min
11/18/2022 11:24 AM	15:00	7.24 pH	14.61 °C	294.26 μS/cm	0.90 mg/L	703.32 NTU	-19.2 mV	955.55 cm	100.00 ml/min
11/18/2022 11:27 AM	18:00	7.24 pH	15.08 °C	296.39 μS/cm	1.66 mg/L	31.62 NTU	-11.6 mV	955.55 cm	100.00 ml/min
11/18/2022 11:30 AM	21:00	7.22 pH	15.34 °C	296.03 μS/cm	0.50 mg/L	25.86 NTU	-23.8 mV	955.55 cm	100.00 ml/min
11/18/2022 11:33 AM	24:00	7.20 pH	15.59 °C	296.10 μS/cm	0.41 mg/L	23.22 NTU	-26.7 mV	955.55 cm	100.00 ml/min
11/18/2022 11:36 AM	27:00	7.20 pH	15.43 °C	295.70 μS/cm	0.36 mg/L	15.32 NTU	-28.7 mV	955.55 cm	100.00 ml/min
11/18/2022 11:39 AM	30:00	7.19 pH	15.63 °C	295.35 μS/cm	0.35 mg/L	63.25 NTU	-28.6 mV	955.55 cm	100.00 ml/min
11/18/2022 11:42 AM	33:00	7.19 pH	15.49 °C	295.20 μS/cm	0.34 mg/L	52.24 NTU	-27.4 mV	955.55 cm	100.00 ml/min
11/18/2022 11:45 AM	36:00	7.18 pH	15.51 °C	295.51 μS/cm	0.33 mg/L	24.22 NTU	-30.0 mV	955.55 cm	100.00 ml/min
11/18/2022 11:46 AM	37:37	7.18 pH	15.65 °C	295.61 μS/cm	0.32 mg/L	24.41 NTU	-30.4 mV	955.55 cm	100.00 ml/min
11/18/2022 11:49 AM	40:37	7.19 pH	15.27 °C	296.41 μS/cm	0.32 mg/L	29.41 NTU	-29.5 mV	955.55 cm	100.00 ml/min

Samples

Sample ID:	Description:
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Test Date / Time: 11/17/2022 4:06:24 PM Project: Culley West Ash Pond (10) Operator Name: Hayley Torres

Location Name: WAP-8S
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 40 ft
Total Depth: 50 ft

Initial Depth to Water: 31.26 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 45 ft Estimated Total Volume Pumped:

5010 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.12 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

				Specific	RDO			Depth to	
Date Time	Elapsed Time	рН	Temperature	Conductivity	Concentration	Turbidity	ORP	Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/17/2022 4:06 PM	00:00	7.32 pH	13.73 °C	638.79 μS/cm	5.85 mg/L	3.72 NTU	-2.8 mV	952.80 cm	100.00 ml/min
11/17/2022 4:09 PM	03:00	7.34 pH	13.36 °C	637.09 μS/cm	5.88 mg/L	6.63 NTU	6.2 mV	952.80 cm	100.00 ml/min
11/17/2022 4:11 PM	05:06	7.35 pH	13.21 °C	634.61 µS/cm	6.01 mg/L	2.83 NTU	10.2 mV	952.80 cm	100.00 ml/min
11/17/2022 4:14 PM	08:06	7.37 pH	12.98 °C	633.34 μS/cm	6.12 mg/L	1.01 NTU	12.7 mV	952.80 cm	100.00 ml/min
11/17/2022 4:17 PM	11.06 7.35 nH 12.62 °C		12.62 °C	635.94 μS/cm	6.03 mg/L	3.15 NTU	15.0 mV	952.80 cm	100.00 ml/min
11/17/2022 4:20 PM	14:06	7.32 pH	11.97 °C	640.39 μS/cm	6.35 mg/L	3.12 NTU	18.7 mV	952.80 cm	100.00 ml/min
11/17/2022 4:23 PM	17:06	7.31 pH	11.16 °C	645.03 μS/cm	6.52 mg/L	3.93 NTU	9.0 mV	952.80 cm	100.00 ml/min
11/17/2022 4:26 PM	20:06	7.32 pH	10.38 °C	648.72 μS/cm	6.46 mg/L	2.91 NTU	-6.1 mV	952.80 cm	100.00 ml/min
11/17/2022 4:29 PM	23:06	7.33 pH	9.82 °C	651.84 μS/cm	6.26 mg/L	4.31 NTU	-13.4 mV	952.80 cm	100.00 ml/min
11/17/2022 4:32 PM	26:06	7.34 pH	9.44 °C	654.04 μS/cm	6.48 mg/L	4.33 NTU	-18.4 mV	952.80 cm	100.00 ml/min
11/17/2022 4:35 PM	29:06	7.34 pH	9.17 °C	655.74 μS/cm	6.14 mg/L	4.50 NTU	-19.4 mV	952.80 cm	100.00 ml/min
11/17/2022 4:38 PM	32:06	7.34 pH	8.84 °C	655.57 μS/cm	6.21 mg/L	2.03 NTU	-23.7 mV	952.80 cm	100.00 ml/min
11/17/2022 4:41 PM	35:06	7.35 pH	8.48 °C	657.20 μS/cm	5.41 mg/L	3.32 NTU	-36.1 mV	952.80 cm	100.00 ml/min
11/17/2022 4:44 PM	38:06	7.35 pH	8.20 °C	657.62 μS/cm	3.85 mg/L	0.59 NTU	-42.1 mV	952.80 cm	100.00 ml/min
11/17/2022 4:47 PM	41:06	7.35 pH	8.13 °C	660.23 μS/cm	2.96 mg/L	0.00 NTU	-46.0 mV	952.80 cm	100.00 ml/min

11/17/2022 4:50 PM	44:06	7.35 pH	8.08 °C	661.03 μS/cm	2.81 mg/L	0.24 NTU	-46.8 mV	952.80 cm	100.00 ml/min
11/17/2022 4:53 PM	47:06	7.34 pH	8.08 °C	662.15 μS/cm	2.67 mg/L	0.43 NTU	-47.7 mV	952.80 cm	100.00 ml/min
11/17/2022 4:56 PM	50:06	7.34 pH	8.07 °C	662.42 μS/cm	2.58 mg/L	0.00 NTU	-49.0 mV	952.80 cm	100.00 ml/min

Samples

Sample ID:	Description:
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CONT	ractor A72	.45						DA	TE		1-99-9	<u>, </u>	
			(GROUND	VATER :	SAMPLI	NG INFO	RMATION	!			T	
Well N	0.	WAF	D-9D										
Water I	Depth (ft)	46.0	9										
Time											·		
Produc	1												
Depth	Of Well (ft)	126.	5										
Inside	Diameter (in)	2											
Standiı	ng Water Depth (ft) (t)												
Volum	e Of Water In Well (gal)												
Purgin	g Device	Dum	P			:							
Volum	e of Bailer/Pump Capacity	1							· · · · · · · · · · · · · · · · · · ·				
Cleani	ng Procedure	Dec	ON										***************************************
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Time F	urging Started	2:54											
Time I	Ourging Stopped	4:15	3										
Sampli	ing Device	D-Due	nP								· · · · · · · · · · · · · · · · · · ·		
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	DTW	1	2:57	3:00		3:06		3:12	3:15	1	3,21	3.29 UC 101	2.2
	pH	46.07	45.95	45.81	45. 80	 		727	7,28 2,28		7,27	7.25	45.87 725
ERS		249	7.40	7.35	7.32	7.30	7,19	 		728	<u> </u>		
PARAMETERS	Conductivity	 	243	243	Xu d	347	5	2742	403	1145	959 No. 0	257	255,9
PAR	Turbidity	194	192	1.08	237	341	369	374.8	2590	1 17 1 17	70.3	150	734
	Dissolved Oxygen	5,87	1.55		0.93	0.86	0.87	0.80	166	1,13	1.38	1.	1.35
	Temp, ° C	6.59	16.35	16.41	16.39	16.37	16,25	16.28	16.30	16,24	16.27	18.33	16.25
	ORP	1-34.9	139.9	_39.9	-39.0	-36.1	1-29° R	18.6	- 7.0	-8,4	·d. 1	4.6	7.9

Form 3005

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GROUNDWATER SAMPLING RECORD

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PROJI LOCA					-				A FILE N DJECT M				
CLIENT FIELD REP													
	RACTOR							DA	TE				
			(GROUNDY	VATER S	SAMPLI	G INFOR	RMATION					
Well No	o.	WAP	9D0	000									
Water I	Depth (ft)												
Time													
Product	l					73		***************************************		,			
Depth (Of Well (ft)												
Inside l	Diameter (in)												
Standin	g Water Depth (ft) (1)												
Volum	e Of Water In Well (gal)							,				***************************************	
Purging	g Device												
Volum	e of Bailer/Pump Capacity												
Cleanir	ng Procedure												
Bails R	emoved/ Volume Removed												
Time P	urging Started												
Time P	urging Stopped												
Sampli	ng Device												
Cleanir	ng Procedure						-						
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	DTW	45.90	45.91	45,91	45.92		45.95	45.96		45.99			16.01
:RS	pH	7.24	7,23	7,23	7,012	7.22	7,22	7.22	777	7.22	****		7,22
METE	Conductivity	J55	<u> </u>	254	254	√54	253	, J	227	J5 J		15 d	<u> 251</u>
PARAMETERS	Turbidity	386	461	37/		303		276	269	230	JS2	λ 5 3	772
	Dissolved Oxygen	1.35	1,35	1.37	1.47	,	1.35	1.38	1.37	1.06	1.61	1.04	1.05
	Temp, ^o C	16.22	16,29	16,17		16.05		16.04		16.00		15.74	15,87
	ORP	14.3	17.8	21.7	24.4	25.0	\$6.0	26.4	92.0	23,2	21.5	20,4	19.6
	ks: (ie; field filtrations, pers ding Water Depth = Depth o			at site, etc.)									
													

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GROUNDWATER SAMPLING RECORD

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LOCA CLIEN	PROJECT LOCATION CLIENT CONTRACTOR							_ 1 _ 1	H&A FILE NO. PROJECT MGR. FIELD REP DATE				
			(GROUNDV	VATER S	SAMPLIN	G INFOR	МАТК	ON				
Well No	o.	MAR	-9D	2019									
Water I	Depth (ft)												
l'ime													
Product													
Depth (of Well (ft)												
Inside I	Diameter (in)												
Standin	g Water Depth (ft) (1)												
Volume	Of Water In Well (gal)												
Purging	Device												
Volume	of Bailer/Pump Capacity												
Cleanin	ng Procedure												
Bails R	emoved/Volume Removed												
Time P	urging Started												
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	Time	4:06	4:09	4:12	4:15	1:18							
	DTW	46.04	46.05	46.11	45.79	45.8			\				
RS	pH	7,21				7.20							
Parameters	Conductivity	251	256	250	249	249							
ARAD	Turbidity	214	187	217	190	229							
Δ.	Dissolved Oxygen	14)		1.02	1.08	1.24						,	
	Temp, ⁰ C	15.82		15.73							 		
	ORP	19.2	17.5	16.3	15.1	1460					<u></u>		
	ks: (ie; field filtrations, perso ding Water Depth = Depth o			at site, etc.)									

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Test Date / Time: 11/22/2022 1:21:11 PM Project: Culley West Ash Pond (20) Operator Name: Hayley Torres

Location Name: WAP-9I
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 80 ft
Total Depth: 90 ft

Initial Depth to Water: 41.89 ft

Pump Type: Dedicated Tubing Type: LDPE

4500 ml

Pump Intake From TOC: 85 ft Estimated Total Volume Pumped:

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.25 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/22/2022 1:21 PM	00:00	7.41 pH	17.03 °C	283.26 μS/cm	2.84 mg/L	37.44 NTU	36.1 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:24 PM	03:00	7.41 pH	17.06 °C	285.90 μS/cm	0.75 mg/L	1.67 NTU	-29.0 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:27 PM	06:00	7.38 pH	17.18 °C	285.84 μS/cm	0.55 mg/L	0.00 NTU	-41.1 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:30 PM	09:00	7.37 pH	17.26 °C	286.42 μS/cm	0.45 mg/L	0.00 NTU	-45.8 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:33 PM	12:00	7.36 pH	17.27 °C	286.15 μS/cm	0.38 mg/L	0.00 NTU	-48.3 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:36 PM	15:00	7.37 pH	17.32 °C	286.21 μS/cm	0.34 mg/L	0.00 NTU	-50.6 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:39 PM	18:00	7.37 pH	17.29 °C	286.34 μS/cm	0.31 mg/L	0.00 NTU	-52.1 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:42 PM	21:00	7.38 pH	17.39 °C	286.24 μS/cm	0.27 mg/L	0.00 NTU	-53.3 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:45 PM	24:00	7.39 pH	17.33 °C	286.31 μS/cm	0.25 mg/L	0.00 NTU	-54.8 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:48 PM	27:00	7.40 pH	17.39 °C	286.25 μS/cm	0.24 mg/L	0.00 NTU	-55.5 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:51 PM	30:00	7.41 pH	17.35 °C	286.48 μS/cm	0.22 mg/L	0.00 NTU	-57.3 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:54 PM	33:00	7.42 pH	17.40 °C	286.25 μS/cm	0.21 mg/L	0.00 NTU	-58.3 mV	1,276.8 cm	100.00 ml/min
11/22/2022 1:57 PM	36:00	7.43 pH	17.34 °C	286.40 μS/cm	0.20 mg/L	0.00 NTU	-59.6 mV	1,276.8 cm	100.00 ml/min
11/22/2022 2:00 PM	39:00	7.43 pH	17.43 °C	285.85 μS/cm	0.18 mg/L	0.00 NTU	-60.8 mV	1,276.8 cm	100.00 ml/min
11/22/2022 2:03 PM	42:00	7.44 pH	17.38 °C	286.21 μS/cm	0.17 mg/L	0.00 NTU	-61.7 mV	1,276.8 cm	100.00 ml/min

11/22/2022	45.00	7 44	47.00.00	205 47 0/2	0.40/1	0.00 NITH	60.0\/	4.070.0	400.001/
2:06 PM	45:00	7.44 pH	17.36 °C	285.47 µS/cm	0.19 mg/L	0.00 NTU	-62.3 mV	1,276.8 cm	100.00 ml/min

Samples

Sample ID:	Description:
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Test Date / Time: 11/18/2022 2:45:05 PM Project: Culley West Ash Pond (13) Operator Name: Hayley Torres

Location Name: WAP-9S
Well Diameter: 2 in
Casing Type: PVC
Screen Length: 10 ft
Top of Screen: 55 ft

Total Depth: 65 ft

Initial Depth to Water: 40.46 ft

Pump Type: Dedicated Tubing Type: LDPE

Pump Intake From TOC: 60 ft Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0 ft Instrument Used: Aqua TROLL 500

Serial Number: 625772

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 5	
11/18/2022 2:45 PM	00:00	7.37 pH	13.71 °C	377.42 μS/cm	2.22 mg/L	566.59 NTU	79.6 mV	1,233.2 cm	100.00 ml/min
11/18/2022 2:48 PM	03:00	7.38 pH	13.54 °C	376.09 μS/cm	2.14 mg/L	434.57 NTU	75.3 mV	1,233.2 cm	100.00 ml/min
11/18/2022 2:51 PM	06:00	7.39 pH	12.44 °C	377.41 μS/cm	2.00 mg/L	423.98 NTU	72.6 mV	1,233.2 cm	100.00 ml/min
11/18/2022 2:54 PM	09:00	7.40 pH	12.11 °C	378.93 μS/cm	1.84 mg/L	337.51 NTU	70.5 mV	1,233.2 cm	100.00 ml/min
11/18/2022 2:57 PM	12:00	7.41 pH	11.68 °C	379.98 μS/cm	1.79 mg/L	331.62 NTU	70.0 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:00 PM	15:00	7.41 pH	13.33 °C	0.07 μS/cm	10.59 mg/L	0.00 NTU	81.1 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:03 PM	18:00	7.32 pH	13.54 °C	0.07 μS/cm	10.56 mg/L	0.00 NTU	88.3 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:06 PM	21:00	7.41 pH	12.66 °C	389.63 μS/cm	1.80 mg/L	300.21 NTU	87.4 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:09 PM	24:00	7.38 pH	12.27 °C	394.68 μS/cm	1.08 mg/L	392.87 NTU	83.7 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:12 PM	27:00	7.39 pH	11.49 °C	395.68 μS/cm	0.89 mg/L	208.55 NTU	80.3 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:15 PM	30:00	7.39 pH	11.28 °C	395.90 μS/cm	0.84 mg/L	334.69 NTU	77.5 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:18 PM	33:00	7.40 pH	10.78 °C	392.08 μS/cm	0.78 mg/L	219.91 NTU	75.7 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:21 PM	36:00	7.40 pH	10.19 °C	397.97 μS/cm	0.76 mg/L	311.77 NTU	74.3 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:24 PM	39:00	7.39 pH	11.25 °C	398.68 μS/cm	0.65 mg/L	252.51 NTU	73.1 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:27 PM	42:00	7.39 pH	11.06 °C	400.11 μS/cm	0.51 mg/L	288.92 NTU	72.2 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:30 PM	45:00	7.38 pH	11.07 °C	400.32 μS/cm	0.47 mg/L	205.94 NTU	71.0 mV	1,233.2 cm	100.00 ml/min

11/18/2022	48:00	7 20 nU	10.63 °C	400.36 μS/cm	0.42 mg/L	260.40 NTU	69.8 mV	1,233.2 cm	100.00 ml/min
3:33 PM	46.00	7.39 pH	10.03 C	400.36 μ3/611	0.42 Hig/L	200.40 NTO	09.0 1110	1,233.2 (111	100.00 111/111111
11/18/2022 3:36 PM	51:00	7.39 pH	10.16 °C	400.41 μS/cm	0.41 mg/L	223.24 NTU	68.1 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:39 PM	54:00	7.39 pH	10.20 °C	401.65 μS/cm	0.41 mg/L	253.53 NTU	66.6 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:42 PM	57:00	7.39 pH	10.42 °C	402.70 μS/cm	0.37 mg/L	252.92 NTU	64.6 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:45 PM	01:00:00	7.37 pH	11.83 °C	405.23 μS/cm	0.33 mg/L	240.39 NTU	61.0 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:48 PM	01:03:00	7.36 pH	12.05 °C	402.77 μS/cm	0.26 mg/L	309.06 NTU	55.0 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:51 PM	01:06:00	7.35 pH	11.93 °C	401.76 μS/cm	0.25 mg/L	264.67 NTU	47.6 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:54 PM	01:09:00	7.37 pH	11.04 °C	400.72 μS/cm	0.24 mg/L	259.63 NTU	41.7 mV	1,233.2 cm	100.00 ml/min
11/18/2022 3:57 PM	01:12:00	7.37 pH	10.65 °C	400.14 μS/cm	0.25 mg/L	220.64 NTU	36.3 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:00 PM	01:15:00	7.37 pH	10.67 °C	399.96 μS/cm	0.25 mg/L	262.18 NTU	31.8 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:03 PM	01:18:00	7.37 pH	11.30 °C	399.15 μS/cm	0.26 mg/L	209.51 NTU	27.7 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:06 PM	01:21:00	7.37 pH	10.99 °C	397.40 μS/cm	0.39 mg/L	303.86 NTU	25.4 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:09 PM	01:24:00	7.46 pH	10.46 °C	0.52 μS/cm	11.08 mg/L	0.00 NTU	46.6 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:12 PM	01:27:00	7.36 pH	11.45 °C	397.48 μS/cm	0.73 mg/L	231.39 NTU	32.8 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:15 PM	01:30:00	7.35 pH	11.60 °C	396.62 μS/cm	0.57 mg/L	176.18 NTU	23.8 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:18 PM	01:33:00	7.35 pH	11.62 °C	395.74 μS/cm	0.51 mg/L	189.01 NTU	16.2 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:21 PM	01:36:00	7.35 pH	11.39 °C	395.69 μS/cm	0.57 mg/L	163.60 NTU	11.0 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:24 PM	01:39:00	7.35 pH	11.60 °C	395.45 μS/cm	1.16 mg/L	196.27 NTU	10.4 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:27 PM	01:42:00	7.34 pH	11.90 °C	395.42 μS/cm	1.10 mg/L	202.40 NTU	10.9 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:30 PM	01:45:00	7.36 pH	10.70 °C	393.16 μS/cm	1.14 mg/L	182.36 NTU	12.0 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:33 PM	01:48:00	7.37 pH	10.35 °C	393.41 μS/cm	1.25 mg/L	127.42 NTU	14.1 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:36 PM	01:51:00	7.39 pH	9.52 °C	387.22 μS/cm	1.34 mg/L	166.08 NTU	16.9 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:39 PM	01:54:00	7.39 pH	9.18 °C	392.95 μS/cm	1.35 mg/L	106.09 NTU	19.7 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:42 PM	01:57:00	7.40 pH	8.88 °C	393.53 μS/cm	1.33 mg/L	106.38 NTU	23.5 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:45 PM	02:00:00	7.40 pH	8.63 °C	393.70 μS/cm	1.35 mg/L	107.27 NTU	26.6 mV	1,233.2 cm	100.00 ml/min
11/18/2022 4:45 PM	02:00:25	7.40 pH	8.59 °C	393.71 μS/cm	1.36 mg/L	108.71 NTU	27.0 mV	1,233.2 cm	100.00 ml/min
11/21/2022 10:23 AM	19:38:41	7.19 pH	2.97 °C	0.09 μS/cm	13.79 mg/L	0.00 NTU	94.6 mV	1,233.2 cm	100.00 ml/min

Samples

Sample ID:	Description:
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VECTREN - FB CULLEY STATION WEST ASH POND

CCR Groundwater Sampling Event Gauging Date: May 15 , 2023 ATC Project No. 170LF01498

WELL ID	DATE	TIME	DTW FROM TOC	
West Ash Pond Wells				
CCR-AP-7	5/15/2023	13:30	7.22	
WAP-1	5/15/2023	12:52	12.10	
WAP-2RR	5/15/2023	13:20	39.56	
WAP-3S	5/15/2023	13:10	37.21	
WAP-3D	5/15/2023	13:10	37.18	
WAP-3D WAP-4S	5/15/2023	12:55	31.04	
WAP-43	5/15/2023	12:55	31.04	
WAP-4D				
	5/15/2023	12:55	33.58	
WAP-5S	5/15/2023	12:35	29.68	
WAP-5I	5/15/2023	12:35	29.63	
WAP-5D	5/15/2023	12:35	30.22	
WAP-6S	5/15/2023	12:55	34.30	
WAP-6I	5/15/2023	12:55	34.89	
WAP-6D	5/15/2023	12:55	39.54	
WAP-7S	5/15/2023	13:15	37.66	
WAP-7D	5/15/2023	13:15	37.29	
WAP-8S	5/15/2023	12:45	32.27	
WAP-8I	5/15/2023	12:45	32.46	
WAP-8D	5/15/2023	12:45	34.75	
WAP-9S	5/15/2023	13:00	41.43	
WAP-9I	5/15/2023	13:00	42.88	
WAP-9D	5/15/2023	13:00	47.45	
Temporary Piezometers				
PZ-1		Destroyed		
PZ-2		Destroyed		
PZ-3	5/15/2023	12:30	9.82	
PZ-4	5/15/2023	12:40	11.54	
PZ-5	5/15/2023 13:05		3.71	
PZ-6	5/15/2023	12:47	11.10	
PZ-7	5/15/2023	13:00	10.72	
PZ-8		Destroyed	•	
PZ-9		Destroyed		
PZ-10		Destroyed		

NOTES

DTW= Depth to Water TOC= Top of Casing

Test Date / Time: 5/22/2023 10:36:03 AM

Project: FB Culley West (18) **Operator Name:** Hayley Torres

Location Name: CCR-AP7

Well Diameter: 2 in Casing Type: Pvc Screen Length: 10 ft Top of Screen: 20 ft

Total Depth: 30 ft

Initial Depth to Water: 7.79 ft

Pump Type: Mp50

Pump Intake From TOC: 25 ft

Estimated Total Volume Pumped:

1800 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/22/2023 10:36 AM	00:00	7.10 pH	17.91 °C	901.94 μS/cm	0.82 mg/L	12.30 NTU	-65.2 mV	7.79 ft	100.00 ml/min
5/22/2023 10:39 AM	03:00	7.11 pH	18.19 °C	928.54 μS/cm	0.63 mg/L	0.41 NTU	-71.0 mV		100.00 ml/min
5/22/2023 10:42 AM	06:00	7.12 pH	18.92 °C	925.32 μS/cm	0.65 mg/L	5.08 NTU	-72.2 mV		100.00 ml/min
5/22/2023 10:45 AM	09:00	7.12 pH	19.01 °C	924.42 μS/cm	0.55 mg/L	24.26 NTU	-73.0 mV	7.79 ft	100.00 ml/min
5/22/2023 10:48 AM	12:00	7.13 pH	18.97 °C	923.98 μS/cm	0.49 mg/L	2.84 NTU	-73.8 mV		100.00 ml/min
5/22/2023 10:51 AM	15:00	7.12 pH	18.93 °C	925.38 μS/cm	0.43 mg/L	3.79 NTU	-74.5 mV		100.00 ml/min
5/22/2023 10:54 AM	18:00	7.13 pH	19.01 °C	926.07 μS/cm	0.42 mg/L	1.08 NTU	-74.8 mV	7.79 ft	100.00 ml/min

Samples

Sample ID:	Description:

Test Date / Time: 5/22/2023 3:48:06 PM

Project: FB Culley West (21) **Operator Name:** Hayley Torres

Location Name: WAP-2R
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft
Top of Screen: 46 ft

Total Depth: 56 ft

Initial Depth to Water: 39.68 ft

Pump Type: Mp50

Pump Intake From TOC: 51 ft

Estimated Total Volume Pumped:

2160 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/22/2023 3:48 PM	00:00	6.69 pH	19.19 °C	835.36 μS/cm	1.59 mg/L	0.20 NTU	43.1 mV	39.68 ft	120.00 ml/min
5/22/2023 3:51 PM	03:00	6.65 pH	18.87 °C	830.11 µS/cm	0.84 mg/L	0.37 NTU	70.0 mV		120.00 ml/min
5/22/2023 3:54 PM	06:00	6.64 pH	18.50 °C	829.57 μS/cm	0.58 mg/L	0.38 NTU	82.5 mV		120.00 ml/min
5/22/2023 3:57 PM	09:00	6.64 pH	18.60 °C	829.25 μS/cm	0.45 mg/L	0.63 NTU	90.0 mV	39.68 ft	120.00 ml/min
5/22/2023 4:00 PM	12:00	6.64 pH	18.44 °C	828.91 µS/cm	0.38 mg/L	0.49 NTU	95.3 mV		120.00 ml/min
5/22/2023 4:03 PM	15:00	6.64 pH	18.48 °C	828.57 μS/cm	0.33 mg/L	0.71 NTU	99.2 mV		120.00 ml/min
5/22/2023 4:06 PM	18:00	6.63 pH	18.35 °C	829.33 μS/cm	0.30 mg/L	0.39 NTU	102.6 mV	39.68 ft	120.00 ml/min

Samples

Sample ID:	Description:

Test Date / Time: 5/19/2023 5:45:07 PM

Project: FB Culley West (17) **Operator Name:** Hayley Torres

Location Name: WAP-3S
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft
Top of Screen: 40 ft

Total Depth: 50 ft

Initial Depth to Water: 37.52 ft

Pump Type: Mp50

Pump Intake From TOC: 45 ft

Estimated Total Volume Pumped:

2160 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/19/2023 5:45 PM	00:00	7.49 pH	19.13 °C	968.06 μS/cm	4.79 mg/L	2.31 NTU	-100.1 mV	37.52 ft	120.00 ml/min
5/19/2023 5:48 PM	03:00	7.56 pH	18.76 °C	1,162.1 μS/cm	1.66 mg/L	5.02 NTU	-56.1 mV		120.00 ml/min
5/19/2023 5:51 PM	06:00	7.58 pH	18.56 °C	1,200.6 μS/cm	0.91 mg/L	5.91 NTU	-44.7 mV		120.00 ml/min
5/19/2023 5:54 PM	09:00	7.59 pH	18.41 °C	1,209.6 μS/cm	0.60 mg/L	2.46 NTU	-45.4 mV	37.52 ft	120.00 ml/min
5/19/2023 5:57 PM	12:00	7.58 pH	18.33 °C	1,210.4 μS/cm	0.48 mg/L	1.25 NTU	-45.8 mV		120.00 ml/min
5/19/2023 6:00 PM	15:00	7.58 pH	18.25 °C	1,210.9 μS/cm	0.41 mg/L	4.23 NTU	-47.0 mV		120.00 ml/min
5/19/2023 6:03 PM	18:00	7.57 pH	18.21 °C	1,210.6 μS/cm	0.35 mg/L	1.42 NTU	-48.5 mV	37.52 ft	120.00 ml/min

Samples

Sample ID:	Description:

Test Date / Time: 5/19/2023 4:48:04 PM

Project: FB Culley West (16) **Operator Name:** Hayley Torres

Location Name: WAP-3D
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: 37.09 ft

Pump Type: Mp50

Pump Intake From TOC: 77.5 ft Estimated Total Volume Pumped:

2160 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

DUP 2

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/19/2023	00:00	7.47 pH	18.81 °C	1,378.4	0.02 mg/l	7.86 NTU	-134.4 mV	37.09 ft	120.00 ml/min
4:48 PM	00.00	7.47 рп	10.01 C	μS/cm	0.93 mg/L 7.86 NTU	7.00 NTO	-134.4 1110	37.0911	120.00 1111/111111
5/19/2023	03:00	7.48 pH	18.89 °C	1,384.9	0.58 mg/L	4.17 NTU	-126.2 mV		120.00 ml/min
4:51 PM	03.00	7.46 pm	10.09 C	μS/cm	0.56 Hig/L		-120.2 1110		
5/19/2023	06:00 7.49 pH 18.93 °C	18 93 °C	1,386.1	0.45 mg/L	5 ma/L 3.16 NTU	-129.3 mV		120.00 ml/min	
4:54 PM	00.00	7. 4 5 pm	10.55	μS/cm	0.45 mg/L	0.101410			120.00 111/111111
5/19/2023	09:00	7.49 pH	18.82 °C	1,384.8	0.38 mg/L	2.39 NTU	-138.0 mV	37.09 ft	120.00 ml/min
4:57 PM	00.00	7.40 pm	10.02 C	μS/cm		2.00 1110	-130.0111	37.0911	120.00 111/111111
5/19/2023	12:00	7.50 pH	18.69 °C	1,385.5	0.33 mg/L	1.61 NTU	-145.3 mV		120.00 ml/min
5:00 PM	12.00	7.50 pm	10.05	μS/cm	0.55 mg/L	1.011110	143.5 111		
5/19/2023	15:00	7.50 pH	18.50 °C	1,385.7	0.30 mg/L	0.79 NTU	-145.8 mV		120.00 ml/min
5:03 PM	13.00	13.00 γ.30 pri 18.50 C μS/c	μS/cm	0.50 Hig/L	0.751010	-145.01110		120.00 1111/111111	
5/19/2023	18:00	7.50 pH	18.49 °C	1,385.2	0.28 mg/L	0.61 NTU	-144.5 mV	37.09 ft	120.00 ml/min
5:06 PM	10.00	7.50 pri	10.49 0	μS/cm	0.26 mg/L	0.01 N10	-144.5 1110	37.09 It	120.00 111/111111

Samples

Sample ID:	Description:

Test Date / Time: 5/18/2023 12:09:09 PM

Project: FB Culley West (9) **Operator Name**: Hayley Torres

Location Name: WAP-4S
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft

Top of Screen: 45 ft Total Depth: 55 ft

Initial Depth to Water: 31.28 ft

Pump Type: Mp50

Pump Intake From TOC: 50 ft

Estimated Total Volume Pumped:

9000 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/18/2023 12:09 PM	00:00	7.15 pH	18.49 °C	1,526.9 μS/cm	1.50 mg/L	672.96 NTU	-24.8 mV	31.28 ft	100.00 ml/min
5/18/2023 12:12 PM	03:00	7.14 pH	18.32 °C	1,544.5 μS/cm	0.80 mg/L	1,240.5 NTU	-30.0 mV		100.00 ml/min
5/18/2023 12:15 PM	06:00	7.13 pH	18.39 °C	1,554.0 μS/cm	0.55 mg/L	426.17 NTU	-31.9 mV		100.00 ml/min
5/18/2023 12:18 PM	09:00	7.12 pH	18.30 °C	1,560.6 μS/cm	0.59 mg/L	956.75 NTU	-33.2 mV	31.28 ft	100.00 ml/min
5/18/2023 12:21 PM	12:00	7.12 pH	18.33 °C	1,559.3 μS/cm	0.33 mg/L	346.25 NTU	-35.5 mV		100.00 ml/min
5/18/2023 12:24 PM	15:00	7.11 pH	18.31 °C	1,559.7 μS/cm	0.28 mg/L	771.64 NTU	-36.7 mV		100.00 ml/min
5/18/2023 12:27 PM	18:00	7.13 pH	18.36 °C	1,546.6 μS/cm	0.26 mg/L	362.68 NTU	-40.2 mV	31.28 ft	100.00 ml/min
5/18/2023 12:30 PM	21:00	7.13 pH	18.38 °C	1,549.5 μS/cm	0.24 mg/L	450.44 NTU	-40.9 mV		100.00 ml/min
5/18/2023 12:33 PM	24:00	7.14 pH	18.58 °C	1,543.3 μS/cm	0.88 mg/L	529.74 NTU	-38.6 mV		100.00 ml/min
5/18/2023 12:36 PM	27:00	7.13 pH	18.27 °C	1,561.1 μS/cm	0.27 mg/L	391.42 NTU	-38.1 mV	31.28 ft	100.00 ml/min
5/18/2023 12:39 PM	30:00	7.13 pH	18.90 °C	1,560.2 μS/cm	0.35 mg/L	175.16 NTU	-38.4 mV		100.00 ml/min
5/18/2023 12:42 PM	33:00	7.12 pH	20.06 °C	1,591.8 μS/cm	0.62 mg/L	687.12 NTU	-40.5 mV		100.00 ml/min
5/18/2023 12:45 PM	36:00	7.12 pH	18.87 °C	1,556.4 μS/cm	0.48 mg/L	229.35 NTU	-34.7 mV	31.28 ft	100.00 ml/min
5/18/2023 12:48 PM	39:00	7.11 pH	18.72 °C	1,568.0 μS/cm	0.34 mg/L	150.76 NTU	-36.1 mV		100.00 ml/min
5/18/2023 12:51 PM	42:00	7.11 pH	18.66 °C	1,570.4 μS/cm	0.30 mg/L	178.99 NTU	-37.1 mV		100.00 ml/min
5/18/2023 12:54 PM	45:00	7.11 pH	18.75 °C	1,570.3 μS/cm	0.28 mg/L	396.11 NTU	-37.3 mV	31.28 ft	100.00 ml/min

5/18/2023				1,563.6					
12:57 PM	48:00	7.12 pH	18.81 °C	µS/cm	2.59 mg/L	203.60 NTU	-30.1 mV		100.00 ml/min
5/18/2023				1,562.4					
1:00 PM	51:00	7.13 pH	18.69 °C	μS/cm	0.37 mg/L	287.76 NTU	-35.2 mV		100.00 ml/min
5/18/2023				1,562.9			22.4.34	24.224	
1:03 PM	54:00	7.13 pH	18.76 °C	μS/cm	0.47 mg/L	762.48 NTU	-28.1 mV	31.28 ft	100.00 ml/min
5/18/2023	F7:00	7 10 511	18.11 °C	1,562.5	0.07 ma/l	4 700 2 NTU	27.0>/		100 00 ml/min
1:06 PM	57:00	7.12 pH	16.11 C	μS/cm	0.87 mg/L	1,799.3 NTU	-27.0 mV		100.00 ml/min
5/18/2023	01:00:00	7.10 pH	18.44 °C	1,573.1	0.18 mg/L	711.34 NTU	-31.3 mV		100.00 ml/min
1:09 PM	01.00.00	7.10 pm	10.44 0	μS/cm	0.10 mg/L	711.541110	-51.5111		100.00 111/111111
5/18/2023	01:03:00	7.10 pH	18.51 °C	1,569.9	0.19 mg/L	870.93 NTU	-32.9 mV	31.28 ft	100.00 ml/min
1:12 PM	01.00.00	7.10 pm	10.51	μS/cm	0.13 mg/L	070.331410	-32.5 IIIV	31.2011	100.00 111/111111
5/18/2023	01:06:00	7.10 pH	18.42 °C	1,576.4	0.19 mg/L	494.24 NTU	-33.1 mV		100.00 ml/min
1:15 PM	01.00.00	7.10 pm	10.42 0	μS/cm	0.10 mg/L	404.241110	00.1 1117		100.00 111/111111
5/18/2023	01:09:00	7.10 pH	18.21 °C	1,580.7	0.20 mg/L	632.40 NTU	-33.9 mV		100.00 ml/min
1:18 PM	01.00.00	7.10 pm	10.21 0	μS/cm	0.20 mg/L	002.401110	00.0 111 V		100.00 111/111111
5/18/2023	01:12:00	7.10 pH	18.48 °C	1,581.9	0.19 mg/L	455.10 NTU	-33.5 mV	31.28 ft	100.00 ml/min
1:21 PM	01.12.00	7.10 pm	10.40 0	μS/cm	0.10 mg/L	400.101110	00.0 111 0	01.2011	100.00 111/111111
5/18/2023	01:15:00	7.10 pH	18.84 °C	1,571.5	1.09 mg/L	541.72 NTU	-30.7 mV		100.00 ml/min
1:24 PM	01.10.00	7.10 pm	10.04 0	μS/cm	1.00 mg/L	041.721110	00.7 1117		100.00 111/111111
5/18/2023	01:18:00	7.10 pH	18.80 °C	1,576.3	0.23 mg/L	350.86 NTU	-33.5 mV		100.00 ml/min
1:27 PM	01.10.00	7.10 pm	10.00	μS/cm	0.20 mg/L	000.001110	00.0 111 0		100.00 1111/11111
5/18/2023	01:21:00	7.10 pH	18.56 °C	1,572.8	0.21 mg/L	229.05 NTU	-34.7 mV	31.28 ft	100.00 ml/min
1:30 PM	01.21.00	7.10 pm	10.50 C	μS/cm	0.21 mg/L	229.03 1110	-34.7 1110	31.2010	100.00 111/111111
5/18/2023	01:24:00	7.10 pH	18.57 °C	1,574.2	0.21 mg/L	233.38 NTU	-35.5 mV		100.00 ml/min
1:33 PM	01.24.00	7.10 pm	10.57	μS/cm	0.21 mg/L	200.00 1110	-55.5 111		100.00 111/111111
5/18/2023	01:27:00	7.10 pH	18.48 °C	1,571.7	0.21 mg/L	293.23 NTU	-36.0 mV		100.00 ml/min
1:36 PM	01.27.00	7.10 pm	10.40 0	μS/cm	0.21 mg/L	200.20 1110	30.0 111		100.00 111/111111
5/18/2023	01:30:00	7.09 pH	18.57 °C	1,574.8	0.21 mg/L	206.61 NTU	-36.3 mV	31.28 ft	100.00 ml/min
1:39 PM	01.50.00	7.00 pm	10.07	μS/cm	0.21 mg/L	200.011410	30.5 111	01.2010	100.00 111/111111

Samples

Sample ID:	Description:
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Test Date / Time: 5/17/2023 7:27:05 PM

Project: FB Culley West (8) **Operator Name:** Hayley Torres

Location Name: WAP-4I
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft
Top of Screen: 75 ft

Total Depth: 85 ft

Initial Depth to Water: 30.91 ft

Pump Type: Mp50

Pump Intake From TOC: 70 ft

Estimated Total Volume Pumped:

2160 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.01 ft Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/17/2023 7:27 PM	00:00	7.43 pH	17.28 °C	338.36 μS/cm	2.90 mg/L	0.52 NTU	45.2 mV	30.91 ft	120.00 ml/min
5/17/2023 7:30 PM	03:00	7.51 pH	16.46 °C	298.45 μS/cm	0.83 mg/L	10.54 NTU	-12.5 mV		120.00 ml/min
5/17/2023 7:33 PM	06:00	7.52 pH	16.10 °C	293.98 μS/cm	0.42 mg/L	6.67 NTU	-23.7 mV		120.00 ml/min
5/17/2023 7:36 PM	09:00	7.50 pH	15.96 °C	292.71 μS/cm	0.29 mg/L	39.30 NTU	-27.6 mV	30.91 ft	120.00 ml/min
5/17/2023 7:39 PM	12:00	7.51 pH	15.80 °C	292.26 μS/cm	0.24 mg/L	18.59 NTU	-31.5 mV		120.00 ml/min
5/17/2023 7:42 PM	15:00	7.50 pH	15.78 °C	291.75 μS/cm	0.21 mg/L	25.31 NTU	-32.7 mV		120.00 ml/min
5/17/2023 7:45 PM	18:00	7.51 pH	15.67 °C	291.44 μS/cm	0.19 mg/L	9.42 NTU	-34.2 mV	30.92 ft	120.00 ml/min

Samples

Sample ID:	Description:

Test Date / Time: 5/17/2023 5:24:24 PM

Project: FB Culley West (7) **Operator Name**: Hayley Torres

Location Name: WAP-4D

Well Diameter: 2 in Casing Type: Pvc Screen Length: 10 ft Top of Screen: 116 ft Total Depth: 126 ft

Initial Depth to Water: 31.89 ft

Pump Type: Mp50

Pump Intake From TOC: 121 ft Estimated Total Volume Pumped:

2520 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/17/2023 5:24 PM	00:00	7.51 pH	18.66 °C	390.58 μS/cm	1.31 mg/L	0.80 NTU	-126.4 mV	31.89 ft	120.00 ml/min
5/17/2023 5:27 PM	03:00	7.56 pH	18.45 °C	381.59 μS/cm	0.62 mg/L	0.00 NTU	-133.7 mV		120.00 ml/min
5/17/2023 5:30 PM	06:00	7.59 pH	17.96 °C	382.84 μS/cm	0.46 mg/L	0.00 NTU	-135.2 mV		120.00 ml/min
5/17/2023 5:33 PM	09:00	7.59 pH	18.02 °C	382.96 μS/cm	0.39 mg/L	0.00 NTU	-134.3 mV	31.89 ft	120.00 ml/min
5/17/2023 5:36 PM	12:00	7.61 pH	17.87 °C	383.36 μS/cm	0.36 mg/L	0.00 NTU	-135.5 mV		120.00 ml/min
5/17/2023 5:39 PM	15:00	7.60 pH	17.92 °C	383.57 μS/cm	0.32 mg/L	0.16 NTU	-134.8 mV		120.00 ml/min
5/17/2023 5:42 PM	18:00	7.61 pH	17.75 °C	383.71 μS/cm	0.31 mg/L	0.62 NTU	-135.7 mV	31.89 ft	120.00 ml/min
5/17/2023 5:45 PM	21:00	7.60 pH	17.80 °C	383.85 μS/cm	0.29 mg/L	0.00 NTU	-134.7 mV		120.00 ml/min

Samples

Sample ID:	Description:	
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Test Date / Time: 5/16/2023 6:15:10 PM

Project: FB Culley West (3) **Operator Name:** Hayley Torres

Location Name: WAP-5S Well Diameter: 2 in Casing Type: Pvc Screen Length: 10 ft

Top of Screen: 40 ft Total Depth: 50 ft

Initial Depth to Water: 29.5 ft

Pump Type: Mp50

Pump Intake From TOC: 45 ft

Estimated Total Volume Pumped:

2520 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.01 ft **Instrument Used: Aqua TROLL 600**

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.01	
5/16/2023	00:00	6.56.511	18.47 °C	1,408.7	1.26 mg/l	1.67 NTU	184.6 mV	29.50 ft	120.00 ml/min
6:15 PM	00.00	6.56 pH	18.47	μS/cm	1.36 mg/L	1.67 NTO	164.6 1117	29.50 11	120.00 mi/min
5/16/2023	03:00	6.55 pH	18.22 °C	1,405.9	0.91 mg/L	0.15 NTU	191.0 mV		120.00 ml/min
6:18 PM	03.00	6.55 рп	10.22 C	μS/cm	0.91 mg/L	0.15 N10	191.01110		120.00 1111/111111
5/16/2023	06:00	6.55 pH	18.26 °C	1,408.1	0.72 mg/L	0.00 NTU	196.0 mV		120.00 ml/min
6:21 PM	00.00	0.55 pm	10.20 C	μS/cm	0.72 mg/L	0.00 1110	190.01110		120.00 1111/111111
5/16/2023	09:00	6.54 pH	18.36 °C	1,407.8	0.61 mg/L	0.00 NTU	197.8 mV	29.50 ft	120.00 ml/min
6:24 PM	09.00	0.54 pri	10.50 C	μS/cm	0.01 mg/L	0.001110	197.01110	29.50 It	120.00 1111/111111
5/16/2023	12:00	6.55 pH	18.57 °C	1,412.1	0.54 mg/L	0.00 NTU	199.4 mV		120.00 ml/min
6:27 PM	12.00	0.55 pri	10.57	μS/cm	0.54 Hig/L	0.001110	199.4 1110		120.00 1111/111111
5/16/2023	15:00	6.54 pH	18.27 °C	1,409.2	0.50 mg/L	0.00 NTU	198.8 mV		120.00 ml/min
6:30 PM	13.00	0.54 pri	10.27	μS/cm	0.50 Hig/L	0.001110	190.01117		120.00 1111/111111
5/16/2023	18:00	6.55 pH	18.23 °C	1,418.2	0.43 mg/L	0.00 NTU	200.3 mV	29.51 ft	120.00 ml/min
6:33 PM	10.00	0.00 pri	10.23 0	μS/cm	0.45 Hig/L	0.00 1110	200.5 1117	20.0110	120.00 1111/111111
5/16/2023	21:00	6.54 pH	18.19 °C	1,411.4	0.38 mg/L	0.00 NTU	200.7 mV		120.00 ml/min
6:36 PM	21.00	0.54 pi i	10.13	μS/cm	0.30 mg/L	0.00 1410	200.7 1117		120.00 1111/111111

Samples

Sa	ample ID:	Description:
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Test Date / Time: 5/16/2023 5:17:59 PM

Project: FB Culley West (2) **Operator Name**: Hayley Torres

Location Name: WAP-5I Well Diameter: 2 in Casing Type: Pvc Screen Length: 10 ft Top of Screen: 75 ft

Total Depth: 85 ft

Initial Depth to Water: 29.55 ft

Pump Type: Mp50

Pump Intake From TOC: 80 ft

Estimated Total Volume Pumped:

2520 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.01	
5/16/2023 5:17 PM	00:00	7.29 pH	16.93 °C	312.15 μS/cm	0.85 mg/L	12.52 NTU	9.7 mV	29.55 ft	120.00 ml/min
5/16/2023 5:20 PM	03:00	7.32 pH	16.82 °C	306.52 μS/cm	0.51 mg/L	7.42 NTU	-7.7 mV		120.00 ml/min
5/16/2023 5:23 PM	06:00	7.32 pH	16.73 °C	306.20 μS/cm	0.37 mg/L	6.48 NTU	-11.0 mV		120.00 ml/min
5/16/2023 5:26 PM	09:00	7.33 pH	16.72 °C	305.84 μS/cm	0.30 mg/L	8.16 NTU	-17.4 mV	29.55 ft	120.00 ml/min
5/16/2023 5:29 PM	12:00	7.33 pH	16.80 °C	305.69 μS/cm	0.25 mg/L	7.03 NTU	-20.9 mV		120.00 ml/min
5/16/2023 5:32 PM	15:00	7.33 pH	16.78 °C	305.27 μS/cm	0.22 mg/L	8.52 NTU	-21.4 mV		120.00 ml/min
5/16/2023 5:35 PM	18:00	7.33 pH	16.73 °C	304.26 μS/cm	0.21 mg/L	7.83 NTU	-21.2 mV	29.55 ft	120.00 ml/min
5/16/2023 5:38 PM	21:00	7.33 pH	16.76 °C	304.26 μS/cm	0.19 mg/L	11.38 NTU	-23.2 mV		120.00 ml/min

Samples

Sample ID:	Description:
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Test Date / Time: 5/16/2023 4:18:01 PM

Project: FB Culley West **Operator Name:** Hayley Torres

Location Name: WAP-5D Well Diameter: 2 in Casing Type: Pvc

Screen Length: 10 ft Top of Screen: 113 ft Total Depth: 123 ft

Initial Depth to Water: 30.08 ft

Pump Type: Mp50

Pump Intake From TOC: 118 m Estimated Total Volume Pumped:

2400 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.01 ft Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10 %	+/- 10	+/- 0.01	
5/16/2023 4:18 PM	00:00	7.11 pH	17.84 °C	412.13 μS/cm	1.35 mg/L	0.62 NTU	10.0 mV	30.08 ft	100.00 ml/min
5/16/2023 4:21 PM	03:00	7.18 pH	17.59 °C	416.44 μS/cm	0.55 mg/L	0.80 NTU	-44.5 mV		100.00 ml/min
5/16/2023 4:24 PM	06:00	7.21 pH	17.33 °C	396.96 μS/cm	0.37 mg/L	0.89 NTU	-69.3 mV		100.00 ml/min
5/16/2023 4:27 PM	09:00	7.20 pH	17.34 °C	399.13 μS/cm	0.31 mg/L	0.39 NTU	-71.6 mV	30.08 ft	100.00 ml/min
5/16/2023 4:30 PM	12:00	7.22 pH	17.26 °C	394.53 μS/cm	0.28 mg/L	1.41 NTU	-79.3 mV		100.00 ml/min
5/16/2023 4:33 PM	15:00	7.21 pH	17.30 °C	392.82 μS/cm	0.25 mg/L	0.00 NTU	-81.2 mV		100.00 ml/min
5/16/2023 4:36 PM	18:00	7.25 pH	17.21 °C	391.80 μS/cm	0.23 mg/L	0.00 NTU	-84.3 mV	30.09 ft	100.00 ml/min
5/16/2023 4:39 PM	21:00	7.23 pH	17.21 °C	391.47 μS/cm	0.22 mg/L	0.00 NTU	-86.2 mV		100.00 ml/min
5/16/2023 4:42 PM	24:00	7.24 pH	17.08 °C	391.46 μS/cm	0.21 mg/L	0.00 NTU	-87.3 mV		100.00 ml/min

Samples

Sample ID:	Description:
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Test Date / Time: 5/18/2023 2:30:03 PM

Project: FB Culley West (10) **Operator Name**: Hayley Torres

Location Name: WAP-6S
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft
Top of Screen: 40 ft

Total Depth: 50 ft

Initial Depth to Water: 34.98 ft

Pump Type: Mp50

Pump Intake From TOC: 45 ft

Estimated Total Volume Pumped:

3960 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.01 ft Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/18/2023 2:30 PM	00:00	7.07 pH	21.15 °C	676.66 μS/cm	6.23 mg/L	22.42 NTU	-100.6 mV	34.98 ft	120.00 ml/min
5/18/2023 2:33 PM	03:00	6.92 pH	19.44 °C	925.51 μS/cm	1.87 mg/L	298.42 NTU	-61.6 mV		120.00 ml/min
5/18/2023 2:36 PM	06:00	6.92 pH	19.27 °C	951.48 μS/cm	0.72 mg/L	149.20 NTU	-52.4 mV		120.00 ml/min
5/18/2023 2:39 PM	09:00	6.94 pH	19.11 °C	938.36 μS/cm	0.45 mg/L	80.38 NTU	-48.5 mV	34.98 ft	120.00 ml/min
5/18/2023 2:42 PM	12:00	6.94 pH	19.02 °C	936.65 μS/cm	0.34 mg/L	40.31 NTU	-46.7 mV		120.00 ml/min
5/18/2023 2:45 PM	15:00	6.95 pH	18.99 °C	927.92 μS/cm	0.28 mg/L	40.29 NTU	-45.3 mV		120.00 ml/min
5/18/2023 2:48 PM	18:00	6.95 pH	19.01 °C	920.97 μS/cm	0.26 mg/L	24.49 NTU	-44.6 mV	34.99 ft	120.00 ml/min
5/18/2023 2:51 PM	21:00	6.96 pH	18.95 °C	915.22 μS/cm	0.23 mg/L	22.16 NTU	-43.7 mV		120.00 ml/min
5/18/2023 2:54 PM	24:00	6.96 pH	18.96 °C	913.61 μS/cm	0.22 mg/L	20.59 NTU	-43.3 mV		120.00 ml/min
5/18/2023 2:57 PM	27:00	6.97 pH	18.94 °C	905.11 μS/cm	0.21 mg/L	19.47 NTU	-42.7 mV	34.99 ft	120.00 ml/min
5/18/2023 3:00 PM	30:00	6.98 pH	18.95 °C	897.86 μS/cm	0.20 mg/L	13.26 NTU	-42.4 mV		120.00 ml/min
5/18/2023 3:03 PM	33:00	6.98 pH	18.94 °C	893.05 μS/cm	0.19 mg/L	15.70 NTU	-42.1 mV		120.00 ml/min

Samples

	Sample ID:	Description:
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Test Date / Time: 5/18/2023 3:51:12 PM

Project: FB Culley West (11) **Operator Name**: Hayley Torres

Location Name: WAP-6I
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft
Top of Screen: 70 ft

Total Depth: 80 ft

Initial Depth to Water: 35.65 ft

Pump Type: Mp50

Pump Intake From TOC: 75 ft

Estimated Total Volume Pumped:

2160 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/18/2023 3:51 PM	00:00	7.39 pH	18.82 °C	370.15 μS/cm	3.10 mg/L	3.07 NTU	-87.8 mV	35.65 ft	120.00 ml/min
5/18/2023 3:54 PM	03:00	7.54 pH	18.01 °C	322.71 μS/cm	0.75 mg/L	9.01 NTU	-96.2 mV		120.00 ml/min
5/18/2023 3:57 PM	06:00	7.55 pH	17.96 °C	319.19 µS/cm	0.41 mg/L	42.71 NTU	-100.5 mV		120.00 ml/min
5/18/2023 4:00 PM	09:00	7.55 pH	17.88 °C	317.01 µS/cm	0.29 mg/L	34.14 NTU	-103.2 mV	35.65 ft	120.00 ml/min
5/18/2023 4:03 PM	12:00	7.56 pH	17.85 °C	316.33 µS/cm	0.23 mg/L	17.72 NTU	-109.1 mV		120.00 ml/min
5/18/2023 4:06 PM	15:00	7.56 pH	17.76 °C	316.40 μS/cm	0.21 mg/L	8.70 NTU	-113.8 mV		120.00 ml/min
5/18/2023 4:09 PM	18:00	7.56 pH	17.73 °C	316.18 μS/cm	0.18 mg/L	3.13 NTU	-116.5 mV	35.65 ft	120.00 ml/min

Samples

Sample ID:	Description:

Test Date / Time: 5/18/2023 4:36:00 PM

Project: FB Culley West (12) **Operator Name:** Hayley Torres

Location Name: WAP-6D
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft
Top of Screen: 105 ft

Total Depth: 115.5 ft

Initial Depth to Water: 40.47 ft

Pump Type: Mp50

Pump Intake From TOC: 110 ft Estimated Total Volume Pumped:

1800 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/18/2023 4:36 PM	00:00	7.31 pH	19.38 °C	359.15 μS/cm	3.35 mg/L	0.00 NTU	-41.9 mV	40.47 ft	100.00 ml/min
5/18/2023 4:39 PM	03:00	7.44 pH	19.19 °C	359.58 μS/cm	1.47 mg/L	0.01 NTU	-116.5 mV		100.00 ml/min
5/18/2023 4:42 PM	06:00	7.51 pH	18.84 °C	359.92 μS/cm	0.97 mg/L	0.00 NTU	-123.6 mV		100.00 ml/min
5/18/2023 4:45 PM	09:00	7.53 pH	18.94 °C	359.89 μS/cm	0.75 mg/L	0.00 NTU	-124.5 mV	40.47 ft	100.00 ml/min
5/18/2023 4:48 PM	12:00	7.54 pH	18.76 °C	360.07 μS/cm	0.62 mg/L	0.00 NTU	-128.1 mV		100.00 ml/min
5/18/2023 4:51 PM	15:00	7.55 pH	18.88 °C	360.10 μS/cm	0.55 mg/L	0.00 NTU	-129.6 mV		100.00 ml/min
5/18/2023 4:54 PM	18:00	7.55 pH	18.84 °C	359.88 μS/cm	0.50 mg/L	0.00 NTU	-131.6 mV	40.47 ft	100.00 ml/min

Samples

Sample ID:	Description:

Test Date / Time: 5/22/2023 1:33:10 PM

Project: FB Culley West (19) **Operator Name:** Hayley Torres

Location Name: WAP-7S
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft
Top of Screen: 50 ft

Total Depth: 60 ft

Initial Depth to Water: 37.81 ft

Pump Type: Mp50

Pump Intake From TOC: 55 ft

Estimated Total Volume Pumped:

1800 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/22/2023 1:33 PM	00:00	10.20 pH	19.67 °C	1,184.0 μS/cm	1.80 mg/L	0.00 NTU	25.8 mV	37.81 ft	100.00 ml/min
5/22/2023 1:36 PM	03:00	10.32 pH	19.42 °C	1,195.6 μS/cm	1.41 mg/L	0.00 NTU	14.0 mV		100.00 ml/min
5/22/2023 1:39 PM	06:00	10.39 pH	19.63 °C	1,203.6 μS/cm	1.13 mg/L	0.00 NTU	7.6 mV		100.00 ml/min
5/22/2023 1:42 PM	09:00	10.44 pH	19.85 °C	1,210.8 μS/cm	0.94 mg/L	0.00 NTU	2.7 mV	37.81 ft	100.00 ml/min
5/22/2023 1:45 PM	12:00	10.47 pH	20.06 °C	1,214.0 μS/cm	0.80 mg/L	0.00 NTU	0.3 mV		100.00 ml/min
5/22/2023 1:48 PM	15:00	10.49 pH	20.33 °C	1,216.9 μS/cm	0.71 mg/L	0.00 NTU	-1.5 mV		100.00 ml/min
5/22/2023 1:51 PM	18:00	10.50 pH	20.45 °C	1,217.9 μS/cm	0.64 mg/L	0.00 NTU	-2.2 mV	37.81 ft	100.00 ml/min

Samples

Sample ID:	Description:
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Test Date / Time: 5/22/2023 2:42:03 PM

Project: FB Culley West (20) **Operator Name**: Hayley Torres

Location Name: WAP-7D
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft
Top of Screen: 68.5 ft

Total Depth: 78.5 ft

Initial Depth to Water: 37.5 ft

Pump Type: Mp50

Pump Intake From TOC: 73 ft

Estimated Total Volume Pumped:

1800 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/22/2023 2:42 PM	00:00	7.26 pH	19.17 °C	2,357.1 μS/cm	1.08 mg/L	6.25 NTU	-63.0 mV	37.50 ft	100.00 ml/min
5/22/2023 2:45 PM	03:00	7.25 pH	19.03 °C	2,366.5 μS/cm	0.68 mg/L	5.21 NTU	-58.3 mV		100.00 ml/min
5/22/2023 2:48 PM	06:00	7.25 pH	18.95 °C	2,369.8 μS/cm	0.50 mg/L	0.40 NTU	-56.8 mV		100.00 ml/min
5/22/2023 2:51 PM	09:00	7.24 pH	19.08 °C	2,373.2 μS/cm	0.41 mg/L	0.00 NTU	-56.4 mV	37.50 ft	100.00 ml/min
5/22/2023 2:54 PM	12:00	7.24 pH	19.41 °C	2,376.0 μS/cm	0.35 mg/L	0.00 NTU	-56.7 mV		100.00 ml/min
5/22/2023 2:57 PM	15:00	7.23 pH	19.42 °C	2,377.7 μS/cm	0.32 mg/L	0.00 NTU	-56.4 mV		100.00 ml/min
5/22/2023 3:00 PM	18:00	7.23 pH	19.57 °C	2,379.7 μS/cm	0.29 mg/L	0.00 NTU	-56.3 mV	37.50 ft	100.00 ml/min

Samples

Sample ID:	Description:

Test Date / Time: 5/17/2023 3:28:31 PM

Project: FB Culley West (4) **Operator Name**: Hayley Torres

Location Name: WAP-8S
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft
Top of Screen: 40 ft
Total Depth: 50 ft

Pump Type: Mp50

Pump Intake From TOC: 45 ft

Estimated Total Volume Pumped:

2284 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min **Instrument Used: Aqua TROLL 600**

Serial Number: 745383

Test Notes:

DUP 1

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/17/2023	00:00	7 42 pU	18.92 °C	1,038.7	0.81 mg/L	31.41 NTU	-125.6 mV		120.00 ml/min
3:28 PM	00.00	7.43 pH	16.92 C	μS/cm	0.61 Hig/L	31.41 N10	-125.61110		120.00 111/111111
5/17/2023	01:02	7.44 pH	18.76 °C	1,035.1	0.70 mg/L	31.45 NTU	-127.8 mV	31.75 ft	120.00 ml/min
3:29 PM	01.02	7.44 pm	18.70 C	μS/cm	0.70 mg/L	31.43 1110	-127.01110	01.7010	120.00 111/111111
5/17/2023	04:02	7.46 pH	18.98 °C	1,035.3	0.44 mg/L	60.09 NTU	-133.0 mV		120.00 ml/min
3:32 PM	04.02	7.40 pm	10.90 C	μS/cm	0.44 mg/L	00.091110	-133.01110		120.00 111/111111
5/17/2023	07:02	7.48 pH	18.84 °C	1,034.8	0.37 mg/L	19.43 NTU	-136.5 mV		120.00 ml/min
3:35 PM	07.02	7.40 pm	16.64 C	μS/cm	0.37 Hig/L	19.43 1110	-130.3111		120.00 111/111111
5/17/2023	10:02	7.47 pH	18.98 °C	1,038.5	0.32 mg/L	6.58 NTU	-137.6 mV	31.75 ft	120.00 ml/min
3:38 PM	10.02	7.47 pm	10.90 C	μS/cm	0.32 Hig/L	0.30 1110	-137.01110	31.731	120.00 111/111111
5/17/2023	13:02	7.48 pH	18.81 °C	1,038.9	0.29 mg/L	12.79 NTU	-139.3 mV		120.00 ml/min
3:41 PM	13.02	7.40 pm	10.01 C	μS/cm	0.29 Hig/L	12.79 1110	-139.5111		120.00 111/111111
5/17/2023	16:02	7.47 pH	18.88 °C	1,039.4	0.27 mg/L	2.69 NTU	-139.7 mV		120.00 ml/min
3:44 PM	10.02	7.47 pm	10.00 C	μS/cm	0.27 Hig/L	2.09 N10	-138.7 1110		120.00 1111/111111
5/17/2023	19:02	7.48 pH	18.76 °C	1,038.0	0.25 mg/L	2.00 NTU	-140.9 mV	31.75 ft	120.00 ml/min
3:47 PM	19.02	7.40 pri	10.70 C	μS/cm	0.23 Hig/L	2.00 1010	-140.91110	01.7010	120.00 111/111111

Samples

Sample ID:	Description:
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Test Date / Time: 5/17/2023 12:30:01 PM

Project: FB Culley West (5) **Operator Name**: Hayley Torres

Location Name: WAP-8I
Well Diameter: 2 in
Casing Type: Pvc
Screen Length: 10 ft
Top of Screen: 70 ft

Total Depth: 80 ft

Initial Depth to Water: 31.75 ft

Pump Type: Mp50

Pump Intake From TOC: 75 ft Estimated Total Volume Pumped:

9360 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.02 ft Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/17/2023 12:30 PM	00:00	11.94 pH	18.93 °C	211.26 μS/cm	8.19 mg/L	948.99 NTU	-62.3 mV	31.75 ft	120.00 ml/min
5/17/2023 12:33 PM	03:00	7.30 pH	18.67 °C	402.93 μS/cm	0.38 mg/L	1,960.0 NTU	-69.6 mV		120.00 ml/min
5/17/2023 12:36 PM	06:00	7.32 pH	18.95 °C	400.48 μS/cm	0.25 mg/L	768.01 NTU	-72.0 mV		120.00 ml/min
5/17/2023 12:39 PM	09:00	7.31 pH	19.14 °C	399.56 μS/cm	0.23 mg/L	1,236.3 NTU	-73.1 mV	31.75 ft	120.00 ml/min
5/17/2023 12:42 PM	12:00	7.32 pH	19.35 °C	399.35 μS/cm	0.21 mg/L	4,772.8 NTU	-76.1 mV		120.00 ml/min
5/17/2023 12:45 PM	15:00	7.34 pH	18.99 °C	398.96 μS/cm	2.37 mg/L	238.14 NTU	-61.5 mV		120.00 ml/min
5/17/2023 12:48 PM	18:00	7.30 pH	18.63 °C	398.59 μS/cm	0.26 mg/L	1,907.2 NTU	-68.9 mV	31.75 ft	120.00 ml/min
5/17/2023 12:51 PM	21:00	7.31 pH	18.60 °C	401.56 μS/cm	0.21 mg/L	129.76 NTU	-76.8 mV		120.00 ml/min
5/17/2023 12:54 PM	24:00	7.30 pH	18.57 °C	399.76 μS/cm	0.17 mg/L	934.17 NTU	-69.1 mV		120.00 ml/min
5/17/2023 12:57 PM	27:00	7.30 pH	18.56 °C	401.63 μS/cm	0.16 mg/L	100.36 NTU	-71.9 mV	31.76 ft	120.00 ml/min
5/17/2023 1:00 PM	30:00	7.30 pH	18.59 °C	400.46 μS/cm	0.14 mg/L	115.54 NTU	-74.6 mV		120.00 ml/min
5/17/2023 1:03 PM	33:00	7.31 pH	18.49 °C	401.99 μS/cm	0.52 mg/L	77.16 NTU	-68.4 mV		120.00 ml/min
5/17/2023 1:06 PM	36:00	7.30 pH	18.52 °C	401.39 μS/cm	0.22 mg/L	81.80 NTU	-73.7 mV	31.76 ft	120.00 ml/min
5/17/2023 1:09 PM	39:00	7.31 pH	18.49 °C	402.07 μS/cm	0.19 mg/L	95.98 NTU	-75.0 mV		120.00 ml/min
5/17/2023 1:12 PM	42:00	7.30 pH	18.59 °C	401.07 μS/cm	0.49 mg/L	20.77 NTU	-69.8 mV		120.00 ml/min
5/17/2023 1:15 PM	45:00	7.30 pH	18.52 °C	401.93 μS/cm	0.14 mg/L	33.16 NTU	-74.2 mV	31.76 ft	120.00 ml/min

5/17/2023 1:18 PM	48:00	7.29 pH	18.57 °C	401.31 μS/cm	0.13 mg/L	14.31 NTU	-75.9 mV		120.00 ml/min
5/17/2023 1:21 PM	51:00	7.30 pH	18.52 °C	401.80 μS/cm	0.13 mg/L	17.56 NTU	-78.0 mV		120.00 ml/min
5/17/2023 1:24 PM	54:00	7.30 pH	18.64 °C	397.77 μS/cm	0.23 mg/L	35.02 NTU	-73.5 mV	31.76 ft	120.00 ml/min
5/17/2023 1:27 PM	57:00	7.31 pH	18.71 °C	398.68 μS/cm	0.14 mg/L	33.34 NTU	-78.8 mV		120.00 ml/min
5/17/2023 1:30 PM	01:00:00	7.31 pH	18.92 °C	398.69 μS/cm	0.15 mg/L	21.40 NTU	-79.7 mV		120.00 ml/min
5/17/2023 1:33 PM	01:03:00	7.31 pH	18.82 °C	398.52 μS/cm	0.17 mg/L	37.66 NTU	-79.8 mV	31.77 ft	120.00 ml/min
5/17/2023 1:36 PM	01:06:00	7.31 pH	18.86 °C	398.59 μS/cm	0.18 mg/L	17.84 NTU	-79.5 mV		120.00 ml/min
5/17/2023 1:39 PM	01:09:00	7.31 pH	19.11 °C	398.71 μS/cm	0.19 mg/L	21.12 NTU	-80.5 mV		120.00 ml/min
5/17/2023 1:42 PM	01:12:00	7.31 pH	19.84 °C	399.50 μS/cm	0.23 mg/L	12.60 NTU	-80.3 mV	31.77 ft	120.00 ml/min
5/17/2023 1:45 PM	01:15:00	7.31 pH	19.81 °C	398.48 μS/cm	0.27 mg/L	7.83 NTU	-79.4 mV		120.00 ml/min
5/17/2023 1:48 PM	01:18:00	7.31 pH	19.99 °C	398.87 μS/cm	0.32 mg/L	6.40 NTU	-78.0 mV	31.77 ft	120.00 ml/min

Samples

Sample ID:	Description:

Test Date / Time: 5/17/2023 2:33:09 PM

Project: FB Culley West (6) **Operator Name:** Hayley Torres

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: 31.92 ft

Pump Type: Mp50

Pump Intake From TOC: 102 ft Estimated Total Volume Pumped:

2160 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/17/2023 2:33 PM	00:00	7.40 pH	18.73 °C	388.75 μS/cm	0.57 mg/L	0.00 NTU	-109.2 mV	31.92 ft	120.00 ml/min
5/17/2023 2:36 PM	03:00	7.43 pH	18.71 °C	400.28 μS/cm	0.36 mg/L	0.11 NTU	-124.7 mV		120.00 ml/min
5/17/2023 2:39 PM	06:00	7.45 pH	18.47 °C	402.88 μS/cm	0.29 mg/L	0.00 NTU	-130.2 mV		120.00 ml/min
5/17/2023 2:42 PM	09:00	7.45 pH	18.48 °C	403.11 μS/cm	0.24 mg/L	0.00 NTU	-132.9 mV	31.92 ft	120.00 ml/min
5/17/2023 2:45 PM	12:00	7.45 pH	18.34 °C	403.73 μS/cm	0.21 mg/L	0.45 NTU	-134.9 mV		120.00 ml/min
5/17/2023 2:48 PM	15:00	7.45 pH	18.49 °C	403.52 μS/cm	0.19 mg/L	0.00 NTU	-136.0 mV		120.00 ml/min
5/17/2023 2:51 PM	18:00	7.45 pH	18.44 °C	404.08 μS/cm	0.17 mg/L	0.00 NTU	-137.8 mV	31.92 ft	120.00 ml/min

Samples

Sample ID:	Description:

Test Date / Time: 5/19/2023 10:42:14 AM

Project: FB Culley West (13) **Operator Name**: Hayley Torres

Location Name: WAP-9S Well Diameter: 2 in Casing Type: Pvc Screen Length: 10 ft

Top of Screen: 60 ft Total Depth: 70 ft

Initial Depth to Water: 41.69 ft

Pump Type: Mp50

Pump Intake From TOC: 65 ft

Estimated Total Volume Pumped:

8280 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.02 ft Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/19/2023 10:42 AM	00:00	7.59 pH	19.24 °C	554.09 μS/cm	3.75 mg/L	453.77 NTU	42.6 mV	41.69 ft	120.00 ml/min
5/19/2023 10:45 AM	03:00	7.62 pH	18.54 °C	571.24 μS/cm	3.43 mg/L	450.96 NTU	-21.4 mV		120.00 ml/min
5/19/2023 10:48 AM	06:00	7.62 pH	18.59 °C	569.37 μS/cm	3.61 mg/L	493.69 NTU	-28.9 mV		120.00 ml/min
5/19/2023 10:51 AM	09:00	7.62 pH	18.50 °C	569.43 μS/cm	4.05 mg/L	375.09 NTU	-29.6 mV	41.70 ft	120.00 ml/min
5/19/2023 10:54 AM	12:00	7.62 pH	18.40 °C	567.49 μS/cm	4.02 mg/L	464.01 NTU	-32.0 mV		120.00 ml/min
5/19/2023 10:57 AM	15:00	7.61 pH	18.48 °C	569.31 μS/cm	3.71 mg/L	289.28 NTU	-30.6 mV		120.00 ml/min
5/19/2023 11:00 AM	18:00	7.61 pH	18.52 °C	570.01 μS/cm	4.19 mg/L	281.72 NTU	-28.5 mV	41.71 ft	120.00 ml/min
5/19/2023 11:03 AM	21:00	7.62 pH	18.50 °C	569.76 μS/cm	4.22 mg/L	214.85 NTU	-29.6 mV		120.00 ml/min
5/19/2023 11:06 AM	24:00	7.62 pH	18.49 °C	569.38 μS/cm	4.25 mg/L	149.18 NTU	-29.4 mV		120.00 ml/min
5/19/2023 11:09 AM	27:00	7.62 pH	18.47 °C	569.66 μS/cm	4.26 mg/L	115.54 NTU	-28.6 mV	41.71 ft	120.00 ml/min
5/19/2023 11:12 AM	30:00	7.62 pH	18.62 °C	570.49 μS/cm	4.25 mg/L	97.75 NTU	-28.3 mV		120.00 ml/min
5/19/2023 11:15 AM	33:00	7.62 pH	18.57 °C	568.67 μS/cm	4.34 mg/L	68.23 NTU	-27.6 mV		120.00 ml/min
5/19/2023 11:18 AM	36:00	7.62 pH	18.49 °C	566.78 μS/cm	4.17 mg/L	73.47 NTU	-27.7 mV	41.71 ft	120.00 ml/min
5/19/2023 11:21 AM	39:00	7.62 pH	18.49 °C	568.57 μS/cm	3.96 mg/L	65.24 NTU	-28.2 mV		120.00 ml/min
5/19/2023 11:24 AM	42:00	7.61 pH	18.45 °C	567.38 μS/cm	4.17 mg/L	70.57 NTU	-27.7 mV		120.00 ml/min
5/19/2023 11:27 AM	45:00	7.61 pH	18.65 °C	562.95 μS/cm	4.23 mg/L	75.17 NTU	-24.9 mV	41.70 ft	120.00 ml/min

5/19/2023	48:00	7.61 pH	18.64 °C	561.83 μS/cm	4.18 mg/L	91.31 NTU	-26.0 mV		120.00 ml/min
11:30 AM	48.00	7.01 pm	10.04 C	361.63 μ3/6111	4.16 Hig/L	91.31 N10	-20.0 1110		120.00 1111/111111
5/19/2023	51:00	7.60 pH	18.98 °C	562.30 µS/cm	4.16 mg/L	95.23 NTU	-22.5 mV		120.00 ml/min
11:33 AM	31.00	7.00 pm	10.90 C	302.30 μ3/cm	4.10 mg/L	95.25 1110	-22.5 111 V		120.00 1111/111111
5/19/2023	54:00	7.60 pH	18.94 °C	561.76 µS/cm	4.33 mg/L	110.60 NTU	-21.2 mV	41.71 ft	120.00 ml/min
11:36 AM	34.00	7.00 pm	10.54 0	301.70 до/ст	4.55 Hig/L	110.001410	-21.2 III V	71.7110	120.00 111/111111
5/19/2023	57:00	7.61 pH	18.38 °C	572.06 µS/cm	3.95 mg/L	126.77 NTU	-27.8 mV		120.00 ml/min
11:39 AM	37.00	7.01 pm	10.50	372.00 μο/οπ	3.55 Hig/L	120.77 1410	-27.01117		120.00 111/111111
5/19/2023	01:00:00	7.59 pH	18.51 °C	575.83 µS/cm	3.69 mg/L	142.54 NTU	-29.6 mV		120.00 ml/min
11:42 AM	01.00.00	7.00 pri	10.01	070.00 до/от	0.00 mg/L	142.041110	20.0111		120.00 111/11111
5/19/2023	01:03:00	7.60 pH	18.57 °C	551.56 µS/cm	4.19 mg/L	30.76 NTU	-31.1 mV	41.71 ft	120.00 ml/min
11:45 AM	01.05.00	7.00 pm	10.57	331.30 до/стт	4.15 mg/L	30.701110	-31.11111	41.7110	120.00 111/111111
5/19/2023	01:06:00	7.60 pH	18.67 °C	550.81 µS/cm	3.85 mg/L	33.62 NTU	-30.5 mV		120.00 ml/min
11:48 AM	01.00.00	7.00 pm	10.07	330.01 μο/απ	3.03 Hig/L	33.02 1110	-50.5 111		120.00 1111/111111
5/19/2023	01:09:00	7.60 pH	18.78 °C	552.47 µS/cm	4.42 mg/L	7.64 NTU	-29.8 mV		120.00 ml/min
11:51 AM	01.09.00	7.00 pri	10.76	332.47 μ3/CIII	7.72 IIIg/L	7.04 1010	25.5 111 V		120.00 111/111111

Samples

Sample ID:	Description:

Test Date / Time: 5/19/2023 12:36:32 PM

Project: FB Culley West (14) **Operator Name**: Hayley Torres

Location Name: WAP-9I Well Diameter: 2 in Casing Type: Pvc Screen Length: 10 ft Top of Screen: 80 ft

Total Depth: 90 ft

Initial Depth to Water: 43.09 ft

Pump Type: Mp50

Pump Intake From TOC: 85 ft Estimated Total Volume Pumped:

3960 ml

Flow Cell Volume: 130 ml Final Flow Rate: 120 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/19/2023 12:36 PM	00:00	7.50 pH	20.26 °C	339.92 μS/cm	4.51 mg/L	42.87 NTU	-32.0 mV	43.09 ft	120.00 ml/min
5/19/2023 12:39 PM	03:00	7.64 pH	19.71 °C	331.82 μS/cm	7.56 mg/L	21.49 NTU	-56.8 mV		120.00 ml/min
5/19/2023 12:42 PM	06:00	7.66 pH	19.37 °C	328.82 μS/cm	6.77 mg/L	54.99 NTU	-62.3 mV		120.00 ml/min
5/19/2023 12:45 PM	09:00	7.66 pH	19.30 °C	326.78 μS/cm	6.28 mg/L	80.20 NTU	-64.5 mV	43.09 ft	120.00 ml/min
5/19/2023 12:48 PM	12:00	7.66 pH	19.38 °C	318.32 μS/cm	6.09 mg/L	78.21 NTU	-65.3 mV		120.00 ml/min
5/19/2023 12:51 PM	15:00	7.65 pH	19.37 °C	327.57 μS/cm	6.51 mg/L	0.83 NTU	-68.3 mV		120.00 ml/min
5/19/2023 12:54 PM	18:00	7.66 pH	19.38 °C	328.18 μS/cm	6.24 mg/L	5.50 NTU	-70.3 mV	43.09 ft	120.00 ml/min
5/19/2023 12:57 PM	21:00	7.65 pH	19.57 °C	326.58 μS/cm	5.38 mg/L	10.52 NTU	-54.9 mV		120.00 ml/min
5/19/2023 1:00 PM	24:00	7.64 pH	19.02 °C	329.41 μS/cm	3.81 mg/L	0.00 NTU	-73.9 mV		120.00 ml/min
5/19/2023 1:03 PM	27:00	7.63 pH	19.42 °C	330.07 μS/cm	1.94 mg/L	0.27 NTU	-81.2 mV	43.09 ft	120.00 ml/min
5/19/2023 1:06 PM	30:00	7.64 pH	19.25 °C	329.69 μS/cm	1.53 mg/L	1.00 NTU	-85.3 mV		120.00 ml/min
5/19/2023 1:09 PM	33:00	7.64 pH	19.34 °C	329.40 μS/cm	1.04 mg/L	3.08 NTU	-88.3 mV		120.00 ml/min

Samples

Sample ID:	Description:
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Test Date / Time: 5/19/2023 2:06:08 PM

Project: FB Culley West (15) **Operator Name**: Hayley Torres

Location Name: WAP-9D Well Diameter: 2 in Casing Type: Pvc

Screen Length: 10 ft Top of Screen: 110 ft Total Depth: 120 ft

Initial Depth to Water: 48.29 ft

Pump Type: Mp50

Pump Intake From TOC: 115 ft Estimated Total Volume Pumped:

6298.333 ml

Flow Cell Volume: 130 ml Final Flow Rate: 100 ml/min

Final Draw Down: 0 ft

Instrument Used: Aqua TROLL 600

Serial Number: 745383

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	рН	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 3 %	+/- 10 %	+/- 10	+/- 10	+/- 0.3	
5/19/2023 2:06 PM	00:00	5.92 pH	20.94 °C	248.59 μS/cm	4.39 mg/L	57.35 NTU	-68.9 mV	48.29 ft	100.00 ml/min
5/19/2023 2:09 PM	03:00	5.84 pH	20.74 °C	243.06 μS/cm	5.54 mg/L	26.73 NTU	-74.9 mV		100.00 ml/min
5/19/2023 2:12 PM	06:00	5.82 pH	20.19 °C	239.54 μS/cm	5.94 mg/L	46.72 NTU	-93.1 mV		100.00 ml/min
5/19/2023 2:15 PM	09:00	5.82 pH	20.28 °C	237.60 μS/cm	6.78 mg/L	46.42 NTU	-119.2 mV	48.29 ft	100.00 ml/min
5/19/2023 2:18 PM	12:00	5.81 pH	20.43 °C	235.20 μS/cm	6.61 mg/L	94.89 NTU	-123.4 mV		100.00 ml/min
5/19/2023 2:21 PM	15:00	5.81 pH	20.37 °C	237.26 μS/cm	6.67 mg/L	72.00 NTU	-123.5 mV		100.00 ml/min
5/19/2023 2:24 PM	18:15	5.80 pH	20.45 °C	237.06 μS/cm	7.56 mg/L	124.54 NTU	-120.6 mV	48.29 ft	100.00 ml/min
5/19/2023 2:27 PM	21:15	5.81 pH	20.87 °C	241.45 μS/cm	8.31 mg/L	39.43 NTU	-115.3 mV		100.00 ml/min
5/19/2023 2:30 PM	24:15	5.81 pH	20.87 °C	238.30 μS/cm	7.41 mg/L	79.75 NTU	-114.5 mV		100.00 ml/min
5/19/2023 2:33 PM	27:15	5.81 pH	20.68 °C	239.70 μS/cm	8.10 mg/L	50.64 NTU	-111.8 mV	48.28 ft	100.00 ml/min
5/19/2023 2:36 PM	30:15	5.80 pH	20.47 °C	240.04 μS/cm	7.54 mg/L	77.93 NTU	-110.8 mV		100.00 ml/min
5/19/2023 2:39 PM	33:11	5.79 pH	20.64 °C	237.56 μS/cm	7.61 mg/L	82.30 NTU	-107.7 mV		100.00 ml/min
5/19/2023 2:42 PM	35:59	5.81 pH	21.03 °C	216.94 μS/cm	7.20 mg/L	67.46 NTU	-108.6 mV	48.28 ft	100.00 ml/min
5/19/2023 2:45 PM	38:59	5.83 pH	20.63 °C	236.95 μS/cm	6.03 mg/L	44.83 NTU	-112.8 mV	48.29 ft	100.00 ml/min
5/19/2023 2:48 PM	41:59	5.82 pH	20.99 °C	236.05 μS/cm	5.74 mg/L	62.61 NTU	-112.4 mV		100.00 ml/min
5/19/2023 2:51 PM	44:59	5.83 pH	20.69 °C	234.86 μS/cm	5.52 mg/L	65.64 NTU	-112.5 mV		100.00 ml/min

5/19/2023 2:54 PM	47:59	5.84 pH	20.08 °C	233.63 µS/cm	5.50 mg/L	73.66 NTU	-111.9 mV	48.29 ft	100.00 ml/min
5/19/2023									
2:57 PM	50:59	5.83 pH	19.65 °C	240.04 μS/cm	5.62 mg/L	37.28 NTU	-109.2 mV		100.00 ml/min
5/19/2023	53:59	5.84 pH	19.82 °C	240.99 µS/cm	4.89 mg/L	48.10 NTU	-110.1 mV		100.00 ml/min
3:00 PM				,			-		
5/19/2023	56:59	5.85 pH	19.45 °C	240.86 µS/cm	5.77 mg/L	37.19 NTU	-104.6 mV	48.29 ft	100.00 ml/min
3:03 PM		,		·					
5/19/2023	59:59	5.87 pH	19.45 °C	241.17 µS/cm	6.23 mg/L	48.25 NTU	-102.3 mV		100.00 ml/min
3:06 PM	00.00	0.07 pm	13.43 0	241.17 μο/οπ	0.23 mg/L	40.23 1110	102.5111		100.00 1111/111111
5/19/2023	01:02:59	5.89 pH	19.87 °C	241.74 µS/cm	6.16 mg/L	41.59 NTU	-102.5 mV		100.00 ml/min
3:09 PM	01.02.59	5.69 рп	19.07 C	241.74 μ3/011	0.10 Hig/L	41.59 NTO	-102.51110		100.00 1111/111111

Samples

Sample ID:	Description:
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APPENDIX C
Laboratory Analytical Reports

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/28/2022 6:17:23 PM

JOB DESCRIPTION

CCR Groundwater Monitoring

JOB NUMBER

180-148407-1

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh PA 15238



Eurofins Pittsburgh

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing Northeast, LLC Pittsburgh and its client. All questions regarding this report should be directed to the Eurofins Environment Testing Northeast, LLC Pittsburgh Project Manager or designee who has signed this report.

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 12/28/2022 6:17:23 PM

Authorized for release by Ken Hayes, Project Manager II Ken.Hayes@et.eurofinsus.com (615)301-5035

Kuntl Haye

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

Laboratory Job ID: 180-148407-1

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-148407-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative 180-148407-1

Comments

No additional comments.

Receipt

The samples were received on 11/23/2022 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 8 coolers at receipt time were 2.1° C, 2.3° C, 2.4° C, 2.4° C, 2.4° C, 2.4° C, 2.6° C and 2.6° C.

Receipt Exceptions

The following samples were received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the TDS analysis within holding time: WAP-4S (180-148407-5), WAP-4I (180-148407-6), WAP-4D (180-148407-7), WAP-5S (180-148407-8), WAP-5D (180-148407-10), WAP-6I (180-148407-12), WAP-6D (180-148407-13) and WAP-8S (180-148407-16).

The time collected on container label for the following sample did not match the information listed on the Chain-of-Custody (COC): WAP-5D (180-148407-9). The time coolected on the container labels list 12:20, while the COC lists 11:00. The sample tech logged per the COC.

The time collected on the container label for the following sample did not match the information listed on the Chain-of-Custody (COC): WAP-5I (180-148407-10). The time collected on the container labels list 11:00, while the COC lists 12:20. The sample tech logged per the COC.

GC Semi VOA

Method 9056A: The following sample was diluted due to the nature of the sample matrix: WAP-7D (180-148407-15). Elevated reporting limits (RLs) are provided. Dilutions based on conductivity results of sample.

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

Metals

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

General Chemistry

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

Narrative

Job Narrative 180-148407-2

Comments

No additional comments.

Receipt

The samples were received on 11/23/2022 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 8 coolers at receipt time were 2.1° C, 2.3° C, 2.4° C, 2.4° C, 2.4° C, 2.4° C, 2.6° C and 2.6° C.

Receipt Exceptions

The following samples were received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the TDS analysis within holding time: WAP-4S (180-148407-5), WAP-4I (180-148407-6), WAP-4D (180-148407-7), WAP-5S (180-148407-8), WAP-5D (180-148407-10), WAP-6S (180-148407-11), WAP-6I (180-148407-12), WAP-6D (180-148407-13) and WAP-8S

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Job ID: 180-148407-1

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-148407-1 (Continued)

Laboratory: Eurofins Pittsburgh (Continued)

(180-148407-16).

The time collected on container label for the following sample did not match the information listed on the Chain-of-Custody (COC): WAP-5D (180-148407-9). The time coolected on the container labels list 12:20, while the COC lists 11:00. The sample tech logged per the COC.

The time collected on the container label for the following sample did not match the information listed on the Chain-of-Custody (COC): WAP-5I (180-148407-10). The time collected on the container labels list 11:00, while the COC lists 12:20. The sample tech logged per the COC.

RAD

Methods 903.0, 9315: Radium-226 batch 592044

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. WAP-9S (180-148407-19), WAP-9I (180-148407-20), WAP-9D (180-148407-21), FIELD BLANK (180-148407-22), BLIND DUP 1 (180-148407-23), BLIND DUP 2 (180-148407-24), CCR-AP-7 (180-148407-25), CC

Method 9315: Radium-226 batch 591878

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. WAP-1 (180-148407-1), WAP-2RR (180-148407-2), WAP-3S (180-148407-3), WAP-3D (180-148407-4), WAP-4S (180-148407-5), WAP-4I (180-148407-6), WAP-4I (180-148407-6[DU]), WAP-4D (180-148407-7), WAP-5S (180-148407-8), WAP-5D (180-148407-9), WAP-5I (180-148407-10), WAP-6S (180-148407-11), WAP-6I (180-148407-12), WAP-6D (180-148407-13), WAP-7S (180-148407-14), WAP-7D (180-148407-15), WAP-8S (180-148407-16), WAP-8I (180-148407-17), WAP-8D (180-148407-18), (LCS 160-591878/2-A) and (MB 160-591878/1-A)

Methods 904.0, 9320: Radium-228 batch 592054

The detection goal was not met for the following samples. Samples were prepped at a reduced volume due to the presence of matrix interferences: WAP-9S (180-148407-19) and WAP-9D (180-148407-21). Analytical results are reported with the detection limit achieved.

Methods 904.0, 9320: Radium-228 batch 592054

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. WAP-9S (180-148407-19), WAP-9I (180-148407-20), WAP-9D (180-148407-21), FIELD BLANK (180-148407-22), BLIND DUP 1 (180-148407-23), BLIND DUP 2 (180-148407-24), CCR-AP-7 (180-148407-25), CC

Method 9320: Radium-228 batch 591884

The detection goal was not met for the following sample. Sample was prepped at a reduced volume due to the presence of matrix interferences: WAP-1 (180-148407-1). Analytical results are reported with the detection limit achieved.

Method 9320: Radium-228 batch 591884

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. WAP-1 (180-148407-1), WAP-2RR (180-148407-2), WAP-3S (180-148407-3), WAP-3D (180-148407-4), WAP-4S (180-148407-5), WAP-4I (180-148407-6), WAP-4I (180-148407-6[DU]), WAP-4D (180-148407-7), WAP-5S (180-148407-8), WAP-5D (180-148407-9), WAP-5I (180-148407-10), WAP-6S (180-148407-11), WAP-6I (180-148407-12), WAP-6D (180-148407-13), WAP-7S (180-148407-14), WAP-7D (180-148407-15), WAP-8S (180-148407-16), WAP-8I (180-148407-17), WAP-8D (180-148407-18), (LCS 160-591884/2-A) and (MB 160-591884/1-A)

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

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Job ID: 180-148407-1

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

Qualifiers

B 4	-4-	-
IV	eta	ıs

QualifierQualifier Description4MS, 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 Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Rad

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.

Eisted 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

Eurofins Pittsburgh

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

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	06-27-22 *
California	State	2891	04-30-23
Connecticut	State	PH-0688	09-30-22 *
Florida	NELAP	E871008	06-30-23
Georgia	State	PA 02-00416	04-30-23
Illinois	NELAP	004375	06-30-23
Kansas	NELAP	E-10350	03-31-23
Kentucky (UST)	State	162013	04-30-23
Kentucky (WW)	State	KY98043	12-31-22
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-23
Maine	State	PA00164	03-06-24
Minnesota	NELAP	042-999-482	12-31-22
New Hampshire	NELAP	2030	04-04-23
New Jersey	NELAP	PA005	06-30-23
New York	NELAP	11182	04-01-23
North Carolina (WW/SW)	State	434	12-31-22
North Dakota	State	R-227	04-30-23
Oregon	NELAP	PA-2151	02-07-23
Pennsylvania	NELAP	02-00416	04-30-23
Rhode Island	State	LAO00362	12-31-22
South Carolina	State	89014	04-20-23
Texas	NELAP	T104704528	03-31-23
US Fish & Wildlife	US Federal Programs	058448	03-31-23
USDA	US Federal Programs	P330-16-00211	06-21-24
Utah	NELAP	PA001462019-8	05-31-23
Virginia	NELAP	10043	09-14-23
West Virginia DEP	State	142	01-31-23
Wisconsin	State	998027800	08-31-23

Laboratory: Eurofins Canton

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	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-21-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23

 $^{^{\}star} \ \text{Accreditation/Certification renewal pending - accreditation/certification considered valid}.$

Eurofins Pittsburgh

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Job ID: 180-148407-1

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Laboratory: Eurofins Canton (Continued)

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

Authority Texas	Program NELAP	Identification Number	Expiration Date 08-31-23
Virginia	NELAP	460175	09-14-23
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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 Dat
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
lowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

Job ID: 180-148407-1

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 $^{{}^{\}star}\operatorname{Accreditation/Certification\ renewal\ pending\ -\ accreditation/certification\ considered\ valid}.$

Eurofins Pittsburgh

Sample Summary

180-148407-25

CCR-AP-7

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
180-148407-1	WAP-1	Water	11/21/22 16:30	11/23/22 09:15	
180-148407-2	WAP-2RR	Water	11/21/22 15:30	11/23/22 09:15	
180-148407-3	WAP-3S	Water	11/21/22 11:45	11/23/22 09:15	
180-148407-4	WAP-3D	Water	11/21/22 10:30	11/23/22 09:15	
180-148407-5	WAP-4S	Water	11/16/22 14:25	11/23/22 09:15	
180-148407-6	WAP-4I	Water	11/16/22 15:40	11/23/22 09:15	
180-148407-7	WAP-4D	Water	11/17/22 10:30	11/23/22 09:15	
180-148407-8	WAP-5S	Water	11/16/22 10:15	11/23/22 09:15	
180-148407-9	WAP-5D	Water	11/16/22 11:00	11/23/22 09:15	
180-148407-10	WAP-5I	Water	11/16/22 12:20	11/23/22 09:15	
180-148407-11	WAP-6S	Water	11/17/22 13:00	11/23/22 09:15	
180-148407-12	WAP-6I	Water	11/17/22 11:50	11/23/22 09:15	
180-148407-13	WAP-6D	Water	11/17/22 14:15	11/23/22 09:15	
180-148407-14	WAP-7S	Water	11/22/22 13:00	11/23/22 09:15	
180-148407-15	WAP-7D	Water	11/22/22 14:00	11/23/22 09:15	
180-148407-16	WAP-8S	Water	11/17/22 16:15	11/23/22 09:15	
180-148407-17	WAP-8I	Water	11/18/22 11:05	11/23/22 09:15	
180-148407-18	WAP-8D	Water	11/18/22 12:40	11/23/22 09:15	
180-148407-19	WAP-9S	Water	11/18/22 16:00	11/23/22 09:15	
180-148407-20	WAP-9I	Water	11/22/22 13:06	11/23/22 09:15	
180-148407-21	WAP-9D	Water	11/22/22 16:30	11/23/22 09:15	
180-148407-22	FIELD BLANK	Water	11/21/22 11:45	11/23/22 09:15	
180-148407-23	BLIND DUP 1	Water	11/21/22 00:01	11/23/22 09:15	
180-148407-24	BLIND DUP 2	Water	11/22/22 00:01	11/23/22 09:15	

Water

11/22/22 10:10 11/23/22 09:15

Job ID: 180-148407-1

Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	EET PIT
6020A	Metals (ICP/MS)	SW846	EET CAN
7470A	Mercury (CVAA)	SW846	EET CAN
EPA 9040C	pH	SW846	EET PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CAN
7470A	Preparation, Mercury	SW846	EET CAN

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 CAN = Eurofins Canton, 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

Job ID: 180-148407-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-148407-1

Matrix: Water

Job ID: 180-148407-1

Date Collected: 11/21/22 16:30 Date Received: 11/23/22 09:15

Client Sample ID: WAP-1

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 15:20	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A		1	50 mL	50 mL	553966 554304	11/30/22 12:00 12/01/22 14:53		EET CAN EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A		1	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 14:19		EET CAN EET CAN
Total/NA Total/NA	Prep Analysis Instrumen	7470A 7470A t ID: H2		1	50 mL	50 mL	553967 554531	11/30/22 12:00 12/02/22 11:32		EET CAN EET CAN
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			419288	11/28/22 14:08	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	419240	11/28/22 15:28	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCPURPLE		1	500.11 mL	1.0 g	591878 594849	12/01/22 09:07 12/27/22 14:13		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCORANGE	≣	1	500.11 mL	1.0 g	591884 594204	12/01/22 09:29 12/19/22 12:13		EET SL EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Client Sample ID: WAP-2RR Lab Sample ID: 180-148407-2

Date Collected: 11/21/22 15:30 Matrix: Water Date Received: 11/23/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 15:01	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A at ID: 114		1	50 mL	50 mL	553966 554304	11/30/22 12:00 12/01/22 14:55		EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A at ID: 114		20	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 14:22		EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A at ID: 114		1	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 17:04		EET CAN
Total/NA Total/NA	Prep Analysis Instrumen	7470A 7470A nt ID: H2		1	50 mL	50 mL	553967 554531	11/30/22 12:00 12/02/22 11:34		EET CAN
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			420258	12/08/22 15:49	MAM	EET PIT

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12/28/2022

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-2RR Lab Sample ID: 180-148407-2

Date Collected: 11/21/22 15:30 **Matrix: Water** Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	419247	11/28/22 17:36	LWM	EET PIT
Total/NA	Prep	PrecSep-21			994.12 mL	1.0 g	591878	12/01/22 09:07	DJP	EET SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCPURPLE		1			594849	12/27/22 14:13	CLP	EET SL
Total/NA	Prep	PrecSep_0			994.12 mL	1.0 g	591884	12/01/22 09:29	DJP	EET SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCORANGE	į.	1			594204	12/19/22 12:13	FLC	EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Client Sample ID: WAP-3S Lab Sample ID: 180-148407-3 Date Collected: 11/21/22 11:45 **Matrix: Water**

Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 15:38	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		1	50 mL	50 mL	553966 554304	11/30/22 12:00 12/01/22 14:58		EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		20	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 14:24		EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		1	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 17:06		EET CAN
Total/NA Total/NA	Prep Analysis Instrumen	7470A 7470A t ID: H2		1	50 mL	50 mL	553967 554531	11/30/22 12:00 12/02/22 11:36		EET CAN
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			419288	11/28/22 14:18	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	419240	11/28/22 15:28	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCPURPLE		1	993.50 mL	1.0 g	591878 594849	12/01/22 09:07 12/27/22 14:13		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCORANGE	· · · · · · · · · · · · · ·	1	993.50 mL	1.0 g	591884 594204	12/01/22 09:29 12/19/22 12:13		EET SL EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Job ID: 180-148407-1

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-148407-4

Lab Sample ID: 180-148407-5

Matrix: Water

Matrix: Water

Job ID: 180-148407-1

Client Sample ID: WAP-3D Date Collected: 11/21/22 10:30 Date Received: 11/23/22 09:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 15:56	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumer	6020A nt ID: 114		1			554304	12/01/22 15:00	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumer	6020A nt ID: 114		20			554512	12/02/22 14:27	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumer	6020A nt ID: 114		1			554512	12/02/22 17:09	DSH	EET CAN
Total/NA	Prep	7470A			50 mL	50 mL	553967	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrumer	7470A nt ID: H2		1			554531	12/02/22 11:38	MRL	EET CAN
Total/NA	Analysis Instrumer	EPA 9040C at ID: PHTITRATOR		1			419288	11/28/22 14:24	MAM	EET PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	419247	11/28/22 17:36	LWM	EET PIT
Total/NA	Prep	PrecSep-21			998.30 mL	1.0 g	591878	12/01/22 09:07	DJP	EET SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCPURPLE		1			594849	12/27/22 14:13	CLP	EET SL
Total/NA	Prep	PrecSep_0			998.30 mL	1.0 g	591884	12/01/22 09:29	DJP	EET SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCORANGE	≣	1			594204	12/19/22 12:13	FLC	EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Client Sample ID: WAP-4S
Date Collected: 11/16/22 14:25

Date Collected: 11/16/22 14:25 Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	419148	11/26/22 16:15	M1D	EET PIT
	Instrumen	t ID: INTEGRION								
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis	6020A		1			554304	12/01/22 15:03	DSH	EET CAN
	Instrumen	t ID: 114								
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis	6020A		100			554512	12/02/22 14:34	DSH	EET CAN
	Instrumen	nt ID: 114								
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis	6020A		1			554512	12/02/22 17:11	DSH	EET CAN
	Instrumen	nt ID: 114								

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-4S Lab Sample ID: 180-148407-5

Date Collected: 11/16/22 14:25

Date Received: 11/23/22 09:15

Matrix: Water

Batch Batch Dil Initial Batch Final Prepared **Prep Type** Method **Factor** Number or Analyzed Type Run **Amount** Amount Analyst Lab Total/NA 7470A 50 mL 553967 11/30/22 12:00 SHB EET CAN Prep 50 mL Total/NA 7470A 554531 12/02/22 11:40 MRL **EET CAN** Analysis 1 Instrument ID: H2 Total/NA Analysis **EPA 9040C** 421852 12/28/22 15:50 ELS **EET PIT** Instrument ID: NOEQUIP Total/NA Analysis SM 2540C 100 mL 100 mL 419108 11/23/22 19:50 LWM **EET PIT** Instrument ID: NOEQUIP PrecSep-21 Total/NA Prep 979.36 mL 1.0 g 591878 12/01/22 09:07 DJP **EET SL** Total/NA Analysis 9315 594849 12/27/22 14:13 CLP EET SL 1 Instrument ID: GFPCPURPLE Total/NA Prep PrecSep_0 979.36 mL 1.0 g 12/01/22 09:29 DJP EET SL 591884 Total/NA Analysis 9320 594204 12/19/22 12:13 FLC EET SL 1 Instrument ID: GFPCORANGE Total/NA Analysis Ra226_Ra228 594896 12/28/22 10:36 CLP **EET SL** 1 Instrument ID: NOEQUIP

Client Sample ID: WAP-4I Lab Sample ID: 180-148407-6

Date Collected: 11/16/22 15:40 Matrix: Water Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 14:06	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A it ID: 114		1	50 mL	50 mL	553966 554304	11/30/22 12:00 12/01/22 14:41	SHB DSH	EET CAN EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A tt ID: 114		1	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 14:07		EET CAN EET CAN
Total/NA Total/NA	Prep Analysis Instrumen	7470A 7470A it ID: H2		1	50 mL	50 mL	553967 554531	11/30/22 12:00 12/02/22 11:15	SHB MRL	EET CAN EET CAN
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			419288	11/28/22 14:47	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	419108	11/23/22 19:50	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 tt ID: GFPCPURPLE		1	998.01 mL	1.0 g	591878 594849	12/01/22 09:07 12/27/22 14:13		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 It ID: GFPCORANGE	Ξ	1	998.01 mL	1.0 g	591884 594204	12/01/22 09:29 12/19/22 12:13		EET SL EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 it ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

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Job ID: 180-148407-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Instrument ID: NOEQUIP

Client Sample ID: WAP-4D

Lab Sample ID: 180-148407-7

Date Collected: 11/17/22 10:30 Matrix: Water Date Received: 11/23/22 09:15

Batch Dil Initial Batch Batch Final **Prepared** Method Factor or Analyzed **Prep Type** Type Run **Amount** Amount Number **Analyst** Lab Total/NA Analysis EPA 9056A 419148 11/26/22 17:10 M₁D EET PIT 1 mL 1 mL Instrument ID: INTEGRION Total Recoverable Prep 3005A 50 mL 50 mL 553966 11/30/22 12:00 SHB **EET CAN** Total Recoverable Analysis 6020A 1 554304 12/01/22 15:10 DSH **EET CAN** Instrument ID: 114 Total Recoverable Prep 3005A 50 mL 50 mL 553966 11/30/22 12:00 SHB **EET CAN** Total Recoverable Analysis 6020A 554512 12/02/22 14:37 DSH **EET CAN** 1 Instrument ID: 114 Total/NA Prep 7470A 50 mL 50 mL 553967 11/30/22 12:00 SHB **EET CAN** Total/NA Analysis 7470A 554531 12/02/22 11:42 MRL **EET CAN** Instrument ID: H2 Total/NA Analysis **EPA 9040C** 419288 11/28/22 14:34 MAM **EET PIT** 1 Instrument ID: PHTITRATOR Total/NA EET PIT Analysis SM 2540C 1 100 mL 100 mL 419108 11/23/22 19:50 LWM Instrument ID: NOEQUIP Total/NA Prep PrecSep-21 999.73 mL 1.0 g 591878 12/01/22 09:07 DJP **EET SL** Total/NA Analysis 9315 1 594849 12/27/22 14:13 CLP EET SL Instrument ID: GFPCPURPLE PrecSep 0 Total/NA 999.73 mL 591884 12/01/22 09:29 DJP **EET SL** Prep 1.0 g Total/NA Analysis 9320 594204 12/19/22 12:14 FLC 1 EET SL Instrument ID: GFPCORANGE Total/NA Analysis Ra226 Ra228 594896 12/28/22 10:36 CLP EET SL

Client Sample ID: WAP-5S Lab Sample ID: 180-148407-8

Date Collected: 11/16/22 10:15

Date Received: 11/23/22 09:15

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 Instrumen	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 17:29	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A it ID: 114		1	50 mL	50 mL	553966 554304	11/30/22 12:00 12/01/22 15:13		EET CAN EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A it ID: 114		20	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 14:39		EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A at ID: 114		1	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 17:13	SHB DSH	EET CAN EET CAN
Total/NA Total/NA	Prep Analysis Instrumen	7470A 7470A it ID: H2		1	50 mL	50 mL	553967 554531	11/30/22 12:00 12/02/22 11:44	SHB MRL	EET CAN EET CAN
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			419288	11/28/22 14:59	MAM	EET PIT

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Job ID: 180-148407-1

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12/28/2022

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-148407-8

Matrix: Water

Job ID: 180-148407-1

Client Sample ID: WAP-5S Date Collected: 11/16/22 10:15 Date Received: 11/23/22 09:15

Prep Type Total/NA Total/NA Total/NA	Batch Type Analysis Prep Analysis	Batch Method SM 2540C PrecSep-21 9315	Run	Pactor 1	Amount 100 mL 988.76 mL	Final Amount 100 mL 1.0 g	Batch Number 419108 591878 594846	Prepared or Analyzed 11/23/22 19:50 12/01/22 09:07 12/27/22 14:14	Analyst LWM DJP	Lab EET PIT EET SL EET SL
	,	t ID: GFPCRED								
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCBLUE		1	988.76 mL	1.0 g	591884 594203	12/01/22 09:29 12/19/22 12:15		EET SL EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Client Sample ID: WAP-5D Lab Sample ID: 180-148407-9

Date Collected: 11/16/22 11:00 **Matrix: Water**

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 9056A ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 17:47	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrument	6020A : ID: 114		1			554304	12/01/22 15:15	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrument	6020A : ID: 114		1			554512	12/02/22 14:41	DSH	EET CAN
Total/NA	Prep	7470A			50 mL	50 mL	553967	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrument	7470A : ID: H2		1			554531	12/02/22 11:46	MRL	EET CAN
Total/NA	Analysis Instrument	EPA 9040C ID: PHTITRATOR		1			419288	11/28/22 15:05	MAM	EET PIT
Total/NA	Analysis Instrument	SM 2540C ID: NOEQUIP		1	100 mL	100 mL	419108	11/23/22 19:50	LWM	EET PIT
Total/NA	Prep	PrecSep-21			969.67 mL	1.0 g	591878	12/01/22 09:07	DJP	EET SL
Total/NA	Analysis Instrument	9315 ID: GFPCRED		1			594846	12/27/22 14:14	CLP	EET SL
Total/NA	Prep	PrecSep 0			969.67 mL	1.0 g	591884	12/01/22 09:29	DJP	EET SL
Total/NA	Analysis Instrument	9320 ID: GFPCBLUE		1		_	594203	12/19/22 12:15	FLC	EET SL
Total/NA	Analysis Instrument	Ra226_Ra228		1			594896	12/28/22 10:36	CLP	EET SL

12/28/2022

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-5I Lab Sample ID: 180-148407-10 Date Collected: 11/16/22 12:20

Matrix: Water

Job ID: 180-148407-1

Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 18:06	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A t ID: 114		1			554304	12/01/22 15:18	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A t ID: 114		1			554512	12/02/22 14:44	DSH	EET CAN
Total/NA	Prep	7470A			50 mL	50 mL	553967	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrumen	7470A t ID: H2		1			554531	12/02/22 11:48	MRL	EET CAN
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			419288	11/28/22 15:11	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	419108	11/23/22 19:50	LWM	EET PIT
Total/NA	Prep	PrecSep-21			992.23 mL	1.0 g	591878	12/01/22 09:07	DJP	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1		-	594846	12/27/22 14:14	CLP	EET SL
Total/NA	Prep	PrecSep_0			992.23 mL	1.0 g	591884	12/01/22 09:29	DJP	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1		-	594203	12/19/22 12:15	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Client Sample ID: WAP-6S Lab Sample ID: 180-148407-11 **Matrix: Water**

Date Collected: 11/17/22 13:00 Date Received: 11/23/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 19:19	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		1	50 mL	50 mL	553966 554304	11/30/22 12:00 12/01/22 15:20		EET CAN EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		10	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 14:46		EET CAN EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		1	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 17:16		EET CAN EET CAN
Total/NA Total/NA	Prep Analysis Instrumen	7470A 7470A t ID: H2		1	50 mL	50 mL	553967 554531	11/30/22 12:00 12/02/22 11:55	SHB MRL	EET CAN EET CAN
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			419288	11/28/22 15:17	MAM	EET PIT

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-148407-11

Matrix: Water

Job ID: 180-148407-1

Date Collected: 11/17/22 13:00 Date Received: 11/23/22 09:15

Client Sample ID: WAP-6S

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			1003.88 mL	1.0 g	591878	12/01/22 09:07	DJP	EET SL
Total/NA	Analysis Instrumer	9315 t ID: GFPCRED		1			594846	12/27/22 14:14	CLP	EET SL
Total/NA	Prep	PrecSep_0			1003.88 mL	1.0 g	591884	12/01/22 09:29	DJP	EET SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCBLUE		1			594203	12/19/22 12:15	FLC	EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Lab Sample ID: 180-148407-12 **Client Sample ID: WAP-61**

Date Collected: 11/17/22 11:50 **Matrix: Water**

Date Received: 11/23/22 09:15

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 ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 19:38	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrument	3005A 6020A ID: 114		1	50 mL	50 mL	553966 554304	11/30/22 12:00 12/01/22 15:22		EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrument	3005A 6020A ID: 114		1	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 14:49		EET CAN
Total/NA Total/NA	Prep Analysis Instrument	7470A 7470A ID: H2		1	50 mL	50 mL	553967 554531	11/30/22 12:00 12/02/22 11:57	SHB MRL	EET CAN
Total/NA	Analysis Instrument	EPA 9040C ID: PHTITRATOR		1			419288	11/28/22 15:22	MAM	EET PIT
Total/NA	Analysis Instrument	SM 2540C ID: NOEQUIP		1	100 mL	100 mL	419108	11/23/22 19:50	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrument	PrecSep-21 9315 ID: GFPCRED		1	984.76 mL	1.0 g	591878 594846	12/01/22 09:07 12/27/22 14:15		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrument	PrecSep_0 9320 ID: GFPCBLUE		1	984.76 mL	1.0 g	591884 594203	12/01/22 09:29 12/19/22 12:16		EET SL EET SL
Total/NA	Analysis Instrument	Ra226_Ra228 ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Lab Sample ID: 180-148407-13 **Client Sample ID: WAP-6D** Date Collected: 11/17/22 14:15

Date Received: 11/23/22 09:15

Busin	T.	Batch	Batch	D	Dil	Initial	Final	Batch	Prepared	Amalust	l ab
Prep	туре	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/I	NA	Analysis	EPA 9056A		1	1 mL	1 mL	419148	11/26/22 19:56	M1D	EET PIT
		Instrumen	t ID: INTEGRION								

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Matrix: Water

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-148407-13

Matrix: Water

Job ID: 180-148407-1

Client Sample ID: WAP-6D Date Collected: 11/17/22 14:15 Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis	6020A		1			554304	12/01/22 15:25	DSH	EET CAN
	Instrumen	t ID: 114								
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis	6020A		1			554512	12/02/22 14:51	DSH	EET CAN
	Instrumen	t ID: 114								
Total/NA	Prep	7470A			50 mL	50 mL	553967	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis	7470A		1			554531	12/02/22 11:59	MRL	EET CAN
	Instrumen	t ID: H2								
Total/NA	Analysis	EPA 9040C		1			419288	11/28/22 15:28	MAM	EET PIT
	Instrumen	t ID: PHTITRATOR								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	419108	11/23/22 19:50	LWM	EET PIT
	Instrumen	t ID: NOEQUIP								
Total/NA	Prep	PrecSep-21			985.02 mL	1.0 g	591878	12/01/22 09:07	DJP	EET SL
Total/NA	Analysis	9315		1			594846	12/27/22 14:15	CLP	EET SL
	Instrumen	t ID: GFPCRED								
Total/NA	Prep	PrecSep_0			985.02 mL	1.0 g	591884	12/01/22 09:29	DJP	EET SL
Total/NA	Analysis	9320		1			594203	12/19/22 12:16	FLC	EET SL
	Instrumen	t ID: GFPCBLUE								
Total/NA	Analysis	Ra226_Ra228		1			594896	12/28/22 10:36	CLP	EET SL
	Instrumen	t ID: NOEQUIP								

Client Sample ID: WAP-7S

Date Collected: 11/22/22 13:00

Lab Sample ID: 180-148407-14

Matrix: Water

Date Received: 11/23/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 20:52	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		1	50 mL	50 mL	553966 554304	11/30/22 12:00 12/01/22 15:27		EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		100	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 14:54		EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		1	50 mL	50 mL	553966 554512	11/30/22 12:00 12/02/22 17:18		EET CAN
Total/NA Total/NA	Prep Analysis Instrumen	7470A 7470A t ID: H2		1	50 mL	50 mL	553967 554531	11/30/22 12:00 12/02/22 12:01		EET CAN
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			419288	11/28/22 15:32	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	419240	11/28/22 15:28	LWM	EET PIT

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12/28/2022

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-7S Lab Sample ID: 180-148407-14

Date Collected: 11/22/22 13:00
Date Received: 11/23/22 09:15

Matrix: Water

Job ID: 180-148407-1

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Method Factor Number or Analyzed Analyst Type Run **Amount Amount** Lab PrecSep-21 Total/NA 995.07 mL 591878 12/01/22 09:07 DJP EET SL Prep 1.0 g Total/NA 9315 594846 12/27/22 14:15 CLP EET SL Analysis 1 Instrument ID: GFPCRED Total/NA Prep PrecSep_0 995.07 mL 1.0 g 591884 12/01/22 09:29 DJP EET SL Total/NA Analysis 9320 1 594201 12/19/22 12:17 FLC EET SL Instrument ID: GFPCRED Total/NA Analysis Ra226_Ra228 594896 12/28/22 10:36 CLP **EET SL** Instrument ID: NOEQUIP

Client Sample ID: WAP-7D Lab Sample ID: 180-148407-15

Date Collected: 11/22/22 14:00 Matrix: Water

Date Received: 11/23/22 09:15

	Batch	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		2.5	1 mL	1 mL	419148	11/26/22 21:10	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrument	6020A t ID: 114		1			554304	12/01/22 15:30	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrument	6020A t ID: 114		100			554512	12/02/22 14:56	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrument	6020A t ID: 114		1			554512	12/02/22 17:21	DSH	EET CAN
Total/NA	Prep	7470A			50 mL	50 mL	553967	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrument	7470A t ID: H2		1			554531	12/02/22 12:03	MRL	EET CAN
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			419288	11/28/22 15:38	MAM	EET PIT
Total/NA	Analysis Instrument	SM 2540C t ID: NOEQUIP		1	50 mL	100 mL	419240	11/28/22 15:28	LWM	EET PIT
Total/NA	Prep	PrecSep-21			999.82 mL	1.0 g	591878	12/01/22 09:07	DJP	EET SL
Total/NA	Analysis Instrumen	9315 ID: GFPCRED		1			594846	12/27/22 14:15	CLP	EET SL
Total/NA	Prep	PrecSep_0			999.82 mL	1.0 g	591884	12/01/22 09:29	DJP	EET SL
Total/NA	Analysis Instrument	9320 t ID: GFPCRED		1			594201	12/19/22 12:17	FLC	EET SL
Total/NA	Analysis Instrument	Ra226_Ra228		1			594896	12/28/22 10:36	CLP	EET SL

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Client: Haley & Aldrich, Inc.

Client Sample ID: WAP-8S

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-148407-16

Matrix: Water

Job ID: 180-148407-1

Date Collected: 11/17/22 16:15

Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 21:29	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554304	12/01/22 15:32	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		10			554512	12/02/22 15:04	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554512	12/02/22 17:23	DSH	EET CAN
Total/NA	Prep	7470A			50 mL	50 mL	553967	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrumen	7470A at ID: H2		1			554531	12/02/22 12:05	MRL	EET CAN
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			419288	11/28/22 15:47	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	419108	11/23/22 19:50	LWM	EET PIT
Total/NA	Prep	PrecSep-21			995.98 mL	1.0 g	591878	12/01/22 09:07	DJP	EET SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCRED		1			594846	12/27/22 14:16	CLP	EET SL
Total/NA	Prep	PrecSep_0			995.98 mL	1.0 g	591884	12/01/22 09:29	DJP	EET SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCRED		1		-	594201	12/19/22 12:17	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Lab Sample ID: 180-148407-17 **Client Sample ID: WAP-8I Matrix: Water**

Date Collected: 11/18/22 11:05 Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION	-	1	1 mL	1 mL	419148	11/26/22 21:47	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554304	12/01/22 15:40	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554512	12/02/22 15:06	DSH	EET CAN
Total/NA	Prep	7470A			50 mL	50 mL	553967	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrumen	7470A at ID: H2		1			554531	12/02/22 12:07	MRL	EET CAN
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			419288	11/28/22 15:59	MAM	EET PIT

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-8I Lab Sample ID: 180-148407-17 Date Collected: 11/18/22 11:05

Matrix: Water

12/28/22 10:36 CLP

594896

Job ID: 180-148407-1

Date Received: 11/23/22 09:15

Analysis

Ra226_Ra228

Instrument ID: NOEQUIP

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	419108	11/23/22 19:50	LWM	EET PIT
Total/NA	Prep	PrecSep-21			994.09 mL	1.0 g	591878	12/01/22 09:07	DJP	EET SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			594846	12/27/22 14:16	CLP	EET SL
Total/NA	Prep	PrecSep_0			994.09 mL	1.0 g	591884	12/01/22 09:29	DJP	EET SL
Total/NA	Analysis	9320		1			594201	12/19/22 12:17	FLC	EET SL
	Instrumer	nt ID: GFPCRED								

Client Sample ID: WAP-8D Lab Sample ID: 180-148407-18 Date Collected: 11/18/22 12:40 **Matrix: Water**

Total/NA

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 22:05	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A t ID: 114		1			554304	12/01/22 15:42	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A t ID: 114		1			554512	12/02/22 15:08	DSH	EET CAN
Total/NA	Prep	7470A			50 mL	50 mL	553967	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrumen	7470A t ID: H2		1			554531	12/02/22 12:09	MRL	EET CAN
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			419288	11/28/22 16:04	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	419108	11/23/22 19:50	LWM	EET PIT
Total/NA	Prep	PrecSep-21			999.02 mL	1.0 g	591878	12/01/22 09:07	DJP	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			594846	12/27/22 14:16	CLP	EET SL
Total/NA	Prep	PrecSep_0			999.02 mL	1.0 g	591884	12/01/22 09:29	DJP	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCRED		1			594201	12/19/22 12:17	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

EET SL

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-148407-19

Matrix: Water

Job ID: 180-148407-1

Client Sample ID: WAP-9S Date Collected: 11/18/22 16:00 Date Received: 11/23/22 09:15

	Batch	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A It ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 22:24	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554304	12/01/22 15:45	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		10			554512	12/02/22 15:11	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554512	12/02/22 17:26	DSH	EET CAN
Total/NA	Prep	7470A			50 mL	50 mL	553967	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrumen	7470A at ID: H2		1			554531	12/02/22 12:11	MRL	EET CAN
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			419288	11/28/22 16:10	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	419108	11/23/22 19:50	LWM	EET PIT
Total/NA	Prep	PrecSep-21			501.04 mL	1.0 g	592044	12/02/22 09:26	DJP	EET SL
Total/NA	Analysis Instrumen	9315 it ID: GFPCBLUE		1		-	594847	12/27/22 14:19	FLC	EET SL
Total/NA	Prep	PrecSep_0			501.04 mL	1.0 g	592054	12/02/22 09:55	DJP	EET SL
Total/NA	Analysis Instrumen	9320 it ID: GFPCRED		1		-	594201	12/19/22 12:19	FLC	EET SL
Total/NA	Analysis	Ra226_Ra228		1			594896	12/28/22 10:36	CLP	EET SL

Client Sample ID: WAP-9I Date Collected: 11/22/22 13:06

Instrument ID: NOEQUIP

Date Received: 11/23/22 09:15

Lab Sample ID: 180-148407-20 **Matrix: Water**

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 23:19	M1D	EET PIT
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419311	11/29/22 18:40	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAI
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554304	12/01/22 15:47	DSH	EET CA
Total Recoverable	Prep	3005A			50 mL	50 mL	553966	11/30/22 12:00	SHB	EET CAI
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554512	12/02/22 15:13	DSH	EET CA
Total/NA	Prep	7470A			50 mL	50 mL	553967	11/30/22 12:00	SHB	EET CA
Total/NA	Analysis Instrumen	7470A rt ID: H2		1			554531	12/02/22 12:13	MRL	EET CA

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12/28/2022

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-9I Lab Sample ID: 180-148407-20

Date Collected: 11/22/22 13:06 Date Received: 11/23/22 09:15

Matrix: Water

Job ID: 180-148407-1

Prep Type Total/NA	Batch Type Analysis	Batch Method EPA 9040C	Run	Factor 1	Initial Amount	Final Amount	Batch Number 419288	Prepared or Analyzed 11/28/22 16:16	Analyst MAM	Lab EET PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	419240	11/28/22 15:28	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep-21 9315 at ID: GFPCBLUE		1	991.56 mL	1.0 g	592044 594847	12/02/22 09:26 12/27/22 14:19		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep_0 9320 at ID: GFPCRED		1	991.56 mL	1.0 g	592054 594201	12/02/22 09:55 12/19/22 12:20		EET SL EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Lab Sample ID: 180-148407-21 **Client Sample ID: WAP-9D**

Date Collected: 11/22/22 16:30 **Matrix: Water**

Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419148	11/27/22 00:51	M1D	EET PIT
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419311	11/29/22 16:31	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553976	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554304	12/01/22 16:23	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553976	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554512	12/02/22 13:53	DSH	EET CAN
Total/NA	Prep	7470A			50 mL	50 mL	553979	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrumen	7470A at ID: H2		1			554305	12/01/22 14:03	MRL	EET CAN
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			419288	11/28/22 16:22	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	419247	11/28/22 17:36	LWM	EET PIT
Total/NA	Prep	PrecSep-21			498.19 mL	1.0 g	592044	12/02/22 09:26	DJP	EET SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCBLUE		1			594847	12/27/22 14:19	FLC	EET SL
Total/NA	Prep	PrecSep_0			498.19 mL	1.0 g	592054	12/02/22 09:55	DJP	EET SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCRED		1		-	594201	12/19/22 12:20	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228		1			594896	12/28/22 10:36	CLP	EET SL

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: FIELD BLANK Lab Sample ID: 180-148407-22

Date Collected: 11/21/22 11:45 Date Received: 11/23/22 09:15

Lab Sample ID: 180-148407-23

Matrix: Water

Matrix: Water

Job ID: 180-148407-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419148	11/27/22 01:10	M1D	EET PIT
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419311	11/29/22 16:49	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		1	50 mL	50 mL	553976 554304	11/30/22 12:00 12/01/22 16:25		EET CAN EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		1	50 mL	50 mL	553976 554512	11/30/22 12:00 12/02/22 13:55		EET CAN EET CAN
Total/NA Total/NA	Prep Analysis Instrumen	7470A 7470A t ID: H2		1	50 mL	50 mL	553979 554305	11/30/22 12:00 12/01/22 14:05		EET CAN EET CAN
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			419288	11/28/22 16:27	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	419247	11/28/22 17:36	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCBLUE		1	996.40 mL	1.0 g	592044 594847	12/02/22 09:26 12/27/22 14:19		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCRED		1	996.40 mL	1.0 g	592054 594201	12/02/22 09:55 12/19/22 12:20		EET SL EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Client Sample ID: BLIND DUP 1

Date Collected: 11/21/22 00:01

Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419148	11/27/22 01:28	M1D	EET PIT
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	419311	11/29/22 18:03	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553976	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		1			554304	12/01/22 16:28	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553976	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A at ID: 114		20			554512	12/02/22 13:58	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553976	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrumen	6020A rt ID: 114		1			554512	12/02/22 17:33	DSH	EET CAN

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-148407-23

Lab Sample ID: 180-148407-24

Matrix: Water

Job ID: 180-148407-1

Client Sample ID: BLIND DUP 1 Date Collected: 11/21/22 00:01

Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			50 mL	50 mL	553979	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrumer	7470A nt ID: H2		1			554305	12/01/22 14:07	MRL	EET CAN
Total/NA	Analysis Instrumer	EPA 9040C nt ID: PHTITRATOR		1			419288	11/28/22 16:32	MAM	EET PIT
Total/NA	Analysis Instrumer	SM 2540C nt ID: NOEQUIP		1	100 mL	100 mL	419247	11/28/22 17:36	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep-21 9315 nt ID: GFPCBLUE		1	988.24 mL	1.0 g	592044 594847	12/02/22 09:26 12/27/22 14:20		EET SL EET SL
Total/NA	Prep	PrecSep_0			988.24 mL	1.0 g	592054	12/02/22 09:55	DJP	EET SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCRED		1			594201	12/19/22 12:20	FLC	EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Client Sample ID: BLIND DUP 2

Date Collected: 11/22/22 00:01

Date Received: 11/23/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419148	11/27/22 01:47	M1D	EET PIT
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419311	11/29/22 18:22	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		1	50 mL	50 mL	553976 554304	11/30/22 12:00 12/01/22 16:30		EET CAN
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A 6020A t ID: 114		1	50 mL	50 mL	553976 554512	11/30/22 12:00 12/02/22 14:05		EET CAN EET CAN
Total/NA Total/NA	Prep Analysis Instrumen	7470A 7470A t ID: H2		1	50 mL	50 mL	553979 554305	11/30/22 12:00 12/01/22 14:09		EET CAN EET CAN
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			419288	11/28/22 16:38	MAM	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	419240	11/28/22 15:28	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCBLUE		1	996.69 mL	1.0 g	592044 594847	12/02/22 09:26 12/27/22 14:20		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCRED		1	996.69 mL	1.0 g	592054 594201	12/02/22 09:55 12/19/22 12:20		EET SL EET SL

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Matrix: Water

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: BLIND DUP 2 Lab Sample ID: 180-148407-24

Date Collected: 11/22/22 00:01 Date Received: 11/23/22 09:15

Matrix: Water

Job ID: 180-148407-1

Batch Batch Dil Initial Batch Final Prepared Method **Factor** or Analyzed **Prep Type** Type Run **Amount Amount** Number Analyst Lab Total/NA Analysis Ra226_Ra228 594896 12/28/22 10:36 CLP EET SL

Client Sample ID: CCR-AP-7 Lab Sample ID: 180-148407-25 Date Collected: 11/22/22 10:10 **Matrix: Water**

Date Received: 11/23/22 09:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	419148	11/26/22 18:24	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	553976	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrument	6020A t ID: 114		1			554304	12/01/22 16:02	DSH	EET CAN
Total Recoverable	Prep	3005A			50 mL	50 mL	553976	11/30/22 12:00	SHB	EET CAN
Total Recoverable	Analysis Instrument	6020A t ID: 114		1			554512	12/02/22 13:41	DSH	EET CAN
Total/NA	Prep	7470A			50 mL	50 mL	553979	11/30/22 12:00	SHB	EET CAN
Total/NA	Analysis Instrument	7470A t ID: H2		1			554305	12/01/22 13:56	MRL	EET CAN
Total/NA	Analysis Instrument	EPA 9040C t ID: PHTITRATOR		1			419288	11/28/22 16:51	MAM	EET PIT
Total/NA	Analysis Instrument	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	419240	11/28/22 15:28	LWM	EET PIT
Total/NA	Prep	PrecSep-21			748.26 mL	1.0 g	592044	12/02/22 09:26	DJP	EET SL
Total/NA	Analysis Instrument	9315 t ID: GFPCRED		1			594846	12/27/22 16:36	CLP	EET SL
Total/NA	Prep	PrecSep_0			748.26 mL	1.0 g	592054	12/02/22 09:55	DJP	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCRED		1			594201	12/19/22 12:20	FLC	EET SL
Total/NA	Analysis Instrument	Ra226_Ra228 t ID: NOEQUIP		1			594896	12/28/22 10:36	CLP	EET SL

Laboratory References:

EET CAN = Eurofins Canton, 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

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Analyst References:

Lab: EET CAN

Batch Type: Prep

SHB = Samuel Banks

Batch Type: Analysis

DSH = David Heakin

MRL = Matthew Loeb

Lab: EET PIT

Batch Type: Analysis

ELS = Edwin Shireman

LWM = Leslie McIntire

M1D = Maureen Donlin

MAM = Matthew Martin

Lab: EET SL

Batch Type: Prep

DJP = Dalton Pieper

Batch Type: Analysis

CLP = Cassandra Park

FLC = Fernando Cruz

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Job ID: 180-148407-1

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Job ID: 180-148407-1

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

Client Semale ID: WAD 4

Client Sample ID: WAP-1 Lab Sample ID: 180-148407-1

Date Collected: 11/21/22 16:30 Matrix: Water Date Received: 11/23/22 09:15

Analyte	- Adcut	Anions, Ion		•						
· · y * *			Qualifier	RL		Unit	_ D	Prepared	Analyzed	Dil Fa
Chloride		36		1.0	0.71	mg/L			11/26/22 15:20	
Fluoride		1.2		0.10	0.026	-			11/26/22 15:20	
Sulfate		230		1.0	0.76	mg/L			11/26/22 15:20	
Method: SW846 6020	A - Meta			coverable						
Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony		0.00084	J	0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 14:53	
Arsenic		0.0039	J	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 14:53	
Barium		0.41		0.0050	0.0022	-		11/30/22 12:00	12/01/22 14:53	
Beryllium		ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 14:53	
Boron		0.016	J	0.020	0.016	mg/L		11/30/22 12:00	12/02/22 14:19	
Cadmium		ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 14:53	
Calcium		160		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 14:53	
Chromium		0.0036	J	0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 14:53	
Cobalt		0.0011		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 14:53	
Lead		0.0027		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 14:19	
Lithium		0.0047	J	0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 14:53	
Molybdenum		ND		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 14:53	
Selenium		ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 14:53	
Thallium		0.00062	J	0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 14:19	
Mercury General Chemistry		ND		0.20		ug/L		11/30/22 12:00	12/02/22 11:32	
Analyte			Qualifier	RL		Unit	_ D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids (S	M 2540C)	710		10	10	mg/L			11/28/22 15:28	
Analyte		Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
pH (SW846 EPA 9040C)		7.4	uc	0.1		SU			44/00/00 44:00	
p (011040 El A 30400)			***	0.1	0.1	30			11/28/22 14:08	
	- Radiu			0.1	0.1	30			11/28/22 14:08	
	- Radiu			Total	0.1	30			11/28/22 14:08	
	- Radiu	m-226 (GFP0	C)		0.1	30			11/28/22 14:08	
Method: SW846 9315		m-226 (GFP0	C) Count	Total		MDC Unit		Prepared	Analyzed	
Method: SW846 9315 Analyte Radium-226		m-226 (GFP)	C) Count Uncert.	Total Uncert.	RL !			•		
Method: SW846 9315 Analyte Radium-226	Result 0.596	m-226 (GFP)	C) Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL !	MDC Unit		•	Analyzed	Dil Fa
Method: SW846 9315 Analyte Radium-226 Carrier	Result 0.596	m-226 (GFP) Qualifier Qualifier	Count Uncert. (2σ+/-) 0.252	Total Uncert. (2σ+/-)	RL !	MDC Unit		12/01/22 09:07 Prepared	Analyzed 12/27/22 14:13	Dil Fa
Method: SW846 9315 Analyte Radium-226 Carrier Ba Carrier	Result 0.596 %Yield 69.7	m-226 (GFPC	Count Uncert. (2σ+/-) 0.252 Limits 40 - 110	Total Uncert. (2σ+/-)	RL !	MDC Unit		12/01/22 09:07 Prepared	Analyzed 12/27/22 14:13 Analyzed	
Method: SW846 9315 Analyte Radium-226 Carrier Ba Carrier	Result 0.596 %Yield 69.7	m-226 (GFPC	Count Uncert. (2σ+/-) 0.252 Limits 40 - 110	Total Uncert. (2σ+/-)	RL !	MDC Unit		12/01/22 09:07 Prepared	Analyzed 12/27/22 14:13 Analyzed	
Method: SW846 9315 Analyte Radium-226 Carrier Ba Carrier	Result 0.596 %Yield 69.7	m-226 (GFP) Qualifier Qualifier m-228 (GFP)	C) Count Uncert. (20+/-) 0.252 Limits 40 - 110	Total Uncert. (2σ+/-) 0.258	RL !	MDC Unit		12/01/22 09:07 Prepared	Analyzed 12/27/22 14:13 Analyzed	Dil Fa
Method: SW846 9315 Analyte Radium-226 Carrier Ba Carrier Method: SW846 9320	Result 0.596 %Yield 69.7 - Radius	m-226 (GFP) Qualifier Qualifier m-228 (GFP)	Count Uncert. (2σ+/-) 0.252 Limits 40 - 110 Count	Total Uncert. (2σ+/-) 0.258	RL 1.00 0	MDC Unit		12/01/22 09:07 Prepared	Analyzed 12/27/22 14:13 Analyzed	Dil Fa
Method: SW846 9315 Analyte Radium-226 Carrier Ba Carrier Method: SW846 9320 Analyte	Result 0.596 %Yield 69.7 - Radius	m-226 (GFP) Qualifier m-228 (GFP) Qualifier	C) Count Uncert. (2σ+/-) 0.252 Limits 40 - 110 C) Count Uncert.	Total Uncert. (2σ+/-) 0.258 Total Uncert.	RL 1.00 0	MDC Unit 0.280 pCi/L		12/01/22 09:07 Prepared 12/01/22 09:07	Analyzed 12/27/22 14:13 Analyzed 12/27/22 14:13 Analyzed	Dil Fa
Method: SW846 9315 Analyte	Result 0.596 %Yield 69.7 - Radius Result 1.63	Qualifier Qualifier m-228 (GFP) Qualifier G	C) Count Uncert. (2σ+/-) 0.252 Limits 40 - 110 C) Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-) 0.258 Total Uncert. (2σ+/-)	RL 1.00 0	MDC Unit .280 pCi/L		12/01/22 09:07 Prepared 12/01/22 09:07 Prepared	Analyzed 12/27/22 14:13 Analyzed 12/27/22 14:13 Analyzed	Dil Fa

12/28/2022

12/01/22 09:29 12/19/22 12:13

40 - 110

80.7

Y Carrier

Client: Haley & Aldrich, Inc. Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-148407-1 **Client Sample ID: WAP-1**

Date Collected: 11/21/22 16:30 **Matrix: Water** Date Received: 11/23/22 09:15

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.22		0.927	0.941	5.00	1.23	pCi/L		12/28/22 10:36	1

Lab Sample ID: 180-148407-2 **Client Sample ID: WAP-2RR Matrix: Water**

Date Collected: 11/21/22 15:30 Date Received: 11/23/22 09:15

Method: SW846 EPA	9056A - Anions, Ion	Chromatogi	raphy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48		1.0	0.71	mg/L			11/26/22 15:01	1
Fluoride	0.35		0.10	0.026	mg/L			11/26/22 15:01	1
Sulfate	170		1.0	0.76	mg/L			11/26/22 15:01	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 14:55	1
Arsenic	0.0012	J	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 14:55	1
Barium	0.033		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 14:55	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 14:55	1
Boron	5.2		0.40	0.32	mg/L		11/30/22 12:00	12/02/22 14:22	20
Cadmium	0.00030	J	0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 14:55	1
Calcium	110		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 14:55	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 14:55	1
Cobalt	0.0022		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 14:55	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 17:04	1
Lithium	0.018		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 14:55	1
Molybdenum	0.070		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 14:55	1
Selenium	0.0059		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 14:55	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 17:04	1

Method: SW846 7470A - Mercury (CVAA)										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 11:34	1

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	650		10	10	mg/L			11/28/22 17:36	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.1	HF	0.1	0.1	SU			12/08/22 15:49	1

Method: SW846 9315 - Radium-226 (GFPC)	
Count	Total

			Uncert.	uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.191		0.103	0.105	1.00	0.136	pCi/L	12/01/22 09:07	12/27/22 14:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					12/01/22 09:07	12/27/22 14:13	1

Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-2RR

Lab Sample ID: 180-148407-2 Date Collected: 11/21/22 15:30

Matrix: Water Date Received: 11/23/22 09:15

Method: SW846 9320 - Radium-228 (GFPC)

Method: 5W646	9320 - Radiu	IIII-220 (GI	rpc)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.830		0.394	0.401	1.00	0.534	pCi/L	12/01/22 09:29	12/19/22 12:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					12/01/22 09:29	12/19/22 12:13	1
Y Carrier	84.5		40 - 110					12/01/22 09:29	12/19/22 12:13	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228 Count Total Uncert. Uncert. Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed

Combined Radium 0.407 0.415 5.00 0.534 pCi/L 12/28/22 10:36 1.02 226 + 228

Lab Sample ID: 180-148407-3 Client Sample ID: WAP-3S Date Collected: 11/21/22 11:45 **Matrix: Water**

Date Received: 11/23/22 09:15

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			11/26/22 15:38	1
	Fluoride	0.64		0.10	0.026	mg/L			11/26/22 15:38	1
	Sulfate	240		1.0	0.76	mg/L			11/26/22 15:38	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 14:58	1
Arsenic	ND		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 14:58	1
Barium	0.037		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 14:58	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 14:58	1
Boron	4.2		0.40	0.32	mg/L		11/30/22 12:00	12/02/22 14:24	20
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 14:58	1
Calcium	110		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 14:58	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 14:58	1
Cobalt	0.00085	J	0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 14:58	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 17:06	1
Lithium	0.088		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 14:58	1
Molybdenum	0.54		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 14:58	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 14:58	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 17:06	1

Method: SW846 7470A - Merc	ury (CVAA)						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND -	0.20	0.13 ug/L		11/30/22 12:00	12/02/22 11:36	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	620		10	10	mg/L			11/28/22 15:28	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.6	HF	0.1	0.1	SU			11/28/22 14:18	1

Eurofins Pittsburgh

12/28/2022

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-3S

Lab Sample ID: 180-148407-3 Date Collected: 11/21/22 11:45 Date Received: 11/23/22 09:15

Matrix: Water

Method: SW846	9315 - Radiu	ım-226 (Gl	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.332		0.117	0.121	1.00	0.127	pCi/L	12/01/22 09:07	12/27/22 14:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.6		40 - 110					12/01/22 09:07	12/27/22 14:13	

Method: SW846 9320 - Radium-228 (GFPC) Total Count Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ MDC Unit $(2\sigma + / -)$ RL Prepared Analyzed Dil Fac 0.553 pCi/L 12/01/22 09:29 12/19/22 12:13 Radium-228 0.901 0.410 0.419 1.00 Carrier **%Yield Qualifier** Limits Prepared Analyzed Ba Carrier 89.6 40 - 110 12/01/22 09:29 12/19/22 12:13 81.9 40 - 110 12/01/22 09:29 12/19/22 12:13 Y Carrier

Method: TAL-STL Ra226 Ra228 - Combined Radium-226 and Radium-228 Count Total Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL MDC Unit Prepared Analyzed Dil Fac **Combined Radium** 0.426 0.436 5.00 0.553 pCi/L 12/28/22 10:36 1.23 226 + 228

Lab Sample ID: 180-148407-4 Client Sample ID: WAP-3D Date Collected: 11/21/22 10:30 **Matrix: Water**

Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	57		1.0	0.71	mg/L			11/26/22 15:56	1
Fluoride	0.39		0.10	0.026	mg/L			11/26/22 15:56	1
Sulfato	390		1.0	0.76	ma/l			11/26/22 15:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:00	1
Arsenic	ND		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:00	1
Barium	0.021		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:00	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:00	1
Boron	5.0		0.40	0.32	mg/L		11/30/22 12:00	12/02/22 14:27	20
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:00	1
Calcium	170		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:00	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:00	1
Cobalt	0.0013		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:00	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 17:09	1
Lithium	0.079		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:00	1
Molybdenum	0.28		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:00	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:00	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 17:09	1

Lab Sample ID: 180-148407-4 **Client Sample ID: WAP-3D**

Date Collected: 11/21/22 10:30 Date Received: 11/23/22 09:15

Matrix: Water

Job ID: 180-148407-1

Analyte	Result Qualifier	RL	MDL (Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.20	0.13	ug/L		11/30/22 12:00	12/02/22 11:38	1

General Chemistry

Analyte Total Dissolved Solids (SM 2540C)	Result 870	Qualifier	RL 10	MDL 10	Unit mg/L	<u>D</u>	Prepared	Analyzed 11/28/22 17:36	Dil Fac
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.8	HF	0.1	0.1	SU			11/28/22 14:24	1

Wethod: 5W846 9	1315 - Radiu	im-226 (Gr								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.116	U	0.0836	0.0842	1.00	0.118	pCi/L	12/01/22 09:07	12/27/22 14:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					12/01/22 09:07	12/27/22 14:13	1

Method: SW846 9320 - Radium-228 (GFPC)

JOEU - Itaaia	IIII-220 (GI	. 0,							
		Count	Total						
		Uncert.	Uncert.						
Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
0.446	U	0.345	0.347	1.00	0.529	pCi/L	12/01/22 09:29	12/19/22 12:13	1
%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
87.6		40 - 110					12/01/22 09:29	12/19/22 12:13	1
83.4		40 - 110					12/01/22 09:29	12/19/22 12:13	1
	Result 0.446 %Yield 87.6	Result Qualifier U	Count Uncert.	Count Uncert. Uncert. Uncert. (2σ+/-) (2σ+/-) 0.446 U	Count Uncert. Uncert. Count Uncert. Cou	Nesult Qualifier (2σ+/-) (2σ+/-) RL MDC	Count Total Uncert. Uncert. Uncert. Uncert. Uncert. O.446 U O.345 O.347 O.529 PCi/L	Result 0.446 Qualifier Uniter U	Result 0.446 Qualifier Units (2σ+/-)

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

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.562		0.355	0.357	5.00	0.529	pCi/L		12/28/22 10:36	1

Client Sample ID: WAP-4S

Lab Sample ID: 180-148407-5 Date Collected: 11/16/22 14:25 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - Anions, Ion Chromatography
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150		1.0	0.71	mg/L			11/26/22 16:15	1
Fluoride	0.26		0.10	0.026	mg/L			11/26/22 16:15	1
Sulfate	490		1.0	0.76	mg/L			11/26/22 16:15	1

Wethou: Syvo46 6020A - Wetais (I	CP/IVIO)	- Total Recov	/erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:03	1
Arsenic	0.012		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:03	1
Barium	0.052		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:03	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:03	1
Boron	13		2.0	1.6	mg/L		11/30/22 12:00	12/02/22 14:34	100
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:03	1

Job ID: 180-148407-1

Client Sample ID: WAP-4S Lab Sample ID: 180-148407-5 Date Collected: 11/16/22 14:25 **Matrix: Water**

Date Received: 11/23/22 09:15

Method: SW846 6020A - Metals (ICP/MS) ·	- Total Reco	overable	(Continued	l)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	270		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:03	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:03	1
Cobalt	0.0017		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:03	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 17:11	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:03	1
Molybdenum	0.46		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:03	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:03	1
Thallium 	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 17:11	1
_ Method: SW846 7470A - Mercury	(CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 11:40	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1300		10	10	mg/L			11/23/22 19:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	8.8	HF	0.1	0.1	SU			12/28/22 15:50	1

Method: SW846	9315 - Radiu	ım-226 (GI	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.112	U	0.0820	0.0826	1.00	0.116	pCi/L	12/01/22 09:07	12/27/22 14:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					12/01/22 09:07	12/27/22 14:13	1

Method: SW846	9320 - Radiu	ım-228 (GI	FPC)							
		•	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.972		0.413	0.423	1.00	0.538	pCi/L	12/01/22 09:29	12/19/22 12:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					12/01/22 09:29	12/19/22 12:13	1
Y Carrier	83.4		40 - 110					12/01/22 09:29	12/19/22 12:13	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	ium-226 an	d Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.08		0.421	0.431	5.00	0.538	pCi/L		12/28/22 10:36	1

Lab Sample ID: 180-148407-6 **Client Sample ID: WAP-4I** Date Collected: 11/16/22 15:40 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - A	Anions, Ion	Chromato	graphy							
Analyte	Result	Qualifier	F	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21		1	.0	0.71	mg/L			11/26/22 14:06	1

Job ID: 180-148407-1

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

Client Sample ID: WAP-4I Lab Sample ID: 180-148407-6

Date Collected: 11/16/22 15:40 **Matrix: Water**

Date Received: 11/23/22 09:15

ı	Method: SW846 EPA 9056A -	Anions, Ion	Chromatogi	raphy (Con	tinued)					
١	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Fluoride	0.15		0.10	0.026	mg/L			11/26/22 14:06	1
	Sulfate	49		1.0	0.76	mg/L			11/26/22 14:06	1

Method: SW846 6020A	- Metals (ICP/MS) -	Total Reco	verable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 14:41	1
Arsenic	0.0069		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 14:41	1
Barium	0.17		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 14:41	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 14:41	1
Boron	0.071		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 14:07	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 14:41	1
Calcium	41		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 14:41	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 14:41	1
Cobalt	0.00043	J	0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 14:41	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 14:07	1
Lithium	0.0028	J	0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 14:41	1
Molybdenum	0.0018	J	0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 14:41	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 14:41	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 14:07	1

Method: SW846 7470A - Merc	cury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 11:15	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	230		10	10	ma/l			11/23/22 19:50	1

, 					•	_		,u., _ u	
Total Dissolved Solids (SM 2540C)	230		10	10	mg/L			11/23/22 19:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.7	HF	0.1	0.1	SU			11/28/22 14:47	1
Madhada OMO 40 0045 Badhana	000 (050	2)							

Method: SW846 93	315 - Radiu	m-226 (GF	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.324		0.126	0.130	1.00	0.144	pCi/L	12/01/22 09:07	12/27/22 14:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.5		40 - 110					12/01/22 09:07	12/27/22 14:13	1

Method: SW846	9320 - Raulu	IIII-220 (GI	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.05		0.414	0.425	1.00	0.517	pCi/L	12/01/22 09:29	12/19/22 12:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.5		40 - 110					12/01/22 09:29	12/19/22 12:13	1
Y Carrier	84.9		40 - 110					12/01/22 09:29	12/19/22 12:13	1

Client: Haley & Aldrich, Inc.

Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-4I Lab Sample ID: 180-148407-6

Date Collected: 11/16/22 15:40 Matrix: Water Date Received: 11/23/22 09:15

				Count	Total					
				Uncert.	Uncert.					
Δ.	nalyte Ro	esult	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	Prepared	Analyzed	Dil Fac
C	ombined Radium	1.38		0.433	0.444	5.00	0.517 pCi/L		12/28/22 10:36	1
2	26 + 228									

Client Sample ID: WAP-4D Lab Sample ID: 180-148407-7

Date Collected: 11/17/22 10:30 Matrix: Water

Date Received: 11/23/22 09:15

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			11/26/22 17:10	1
Fluoride	0.15		0.10	0.026	mg/L			11/26/22 17:10	1
Sulfate	31		1.0	0.76	mg/L			11/26/22 17:10	1

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

Method: SW846 6020A	A - Metais (ICP/MS)	- Total Reco	overable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:10	1
Arsenic	0.0078		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:10	1
Barium	0.25		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:10	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:10	1
Boron	0.035		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 14:37	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:10	1
Calcium	47		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:10	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:10	1
Cobalt	ND		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:10	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 14:37	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:10	1
Molybdenum	0.0049	J	0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:10	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:10	1
Thallium	ND		0.0010	0.00020	ma/l		11/30/22 12:00	12/02/22 14:37	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D)	Prepared	Analyzed	Dil Fac	
Mercury	ND		0.20	0.13	ua/L			1/30/22 12:00	12/02/22 11:42	1	

General Chemistry

Analyte	Result	Qualifier	KL	MDL	Unit	U	Prepared	Analyzeu	DII Fac	
Total Dissolved Solids (SM 2540C)	240		10	10	mg/L			11/23/22 19:50	1	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac	
pH (SW846 EPA 9040C)	7.0	HE	0.1	0.1	SU			11/28/22 14:34	1	

Method: SW846 9315 - Radium-226 (GFPC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.391		0.125	0.129	1.00	0.118	pCi/L	12/01/22 09:07	12/27/22 14:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					12/01/22 09:07	12/27/22 14:13	1

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12/28/2022

Client: Haley & Aldrich, Inc. Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-4D

Date Collected: 11/17/22 10:30 Date Received: 11/23/22 09:15 Lab Sample ID: 180-148407-7

Lab Sample ID: 180-148407-8

Matrix: Water

Matrix: Water

Method: SW846 9320 - Radium-228 (GFPC)

		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.903		0.373	0.382	1.00	0.478	pCi/L	12/01/22 09:29	12/19/22 12:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					12/01/22 09:29	12/19/22 12:14	1
Y Carrier	87.9		40 - 110					12/01/22 09:29	12/19/22 12:14	1

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

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.29		0.393	0.403	5.00	0.478	pCi/L		12/28/22 10:36	1
226 + 228										

Client Sample ID: WAP-5S

Date Collected: 11/16/22 10:15

Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		1.0	0.71	mg/L			11/26/22 17:29	1
Fluoride	0.13		0.10	0.026	mg/L			11/26/22 17:29	1
Sulfate	430		1.0	0.76	mg/L			11/26/22 17:29	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:13	1
Arsenic	ND		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:13	1
Barium	0.037		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:13	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:13	1
Boron	4.8		0.40	0.32	mg/L		11/30/22 12:00	12/02/22 14:39	20
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:13	1
Calcium	190		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:13	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:13	1
Cobalt	0.0062		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:13	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 17:13	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:13	1
Molybdenum	ND		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:13	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:13	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 17:13	1

Method: SW846 7470A - Mercu	ıry (CVAA)								
Analyte	Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 11:44	1
[

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1200		10	10	mg/L			11/23/22 19:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.2	HF	0.1	0.1	SU			11/28/22 14:59	1

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12/28/2022

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-5S Lab Sample ID: 180-148407-8

Date Collected: 11/16/22 10:15

Matrix: Water

Date Received: 11/23/22 09:15

Method: SW846	9315 - Radiu	m-226 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0193	U	0.0553	0.0553	1.00	0.105	pCi/L	12/01/22 09:07	12/27/22 14:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					12/01/22 09:07	12/27/22 14:14	1

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.47		0.471	0.490	1.00	0.550	pCi/L	12/01/22 09:29	12/19/22 12:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					12/01/22 09:29	12/19/22 12:15	1
Y Carrier	82.2		40 - 110					12/01/22 09:29	12/19/22 12:15	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	ium-226 aı	nd Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.49		0.474	0.493	5.00	0.550	pCi/L		12/28/22 10:36	1

Client Sample ID: WAP-5D

Date Collected: 11/16/22 11:00

Matrix: Water

Date Received: 11/23/22 09:15

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			11/26/22 17:47	1		
Fluoride	0.14		0.10	0.026	mg/L			11/26/22 17:47	1		
Sulfate	42		1.0	0.76	mg/L			11/26/22 17:47	1		

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:15	1
Arsenic	0.010		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:15	1
Barium	0.19		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:15	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:15	1
Boron	0.039		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 14:41	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:15	1
Calcium	47		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:15	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:15	1
Cobalt	ND		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:15	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 14:41	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:15	1
Molybdenum	0.0034	J	0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:15	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:15	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 14:41	1

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Job ID: 180-148407-1

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Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-5D

Date Collected: 11/16/22 11:00 Date Received: 11/23/22 09:15 Lab Sample ID: 180-148407-9

Matrix: Water

Analyte	Result Qualifier	RL	MDL (Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.20	0.13 ι	ug/L		11/30/22 12:00	12/02/22 11:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	230		10	10	mg/L			11/23/22 19:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

Method: SW846 9315 - Radium-226 (GFPC)

Method. Syvoto 3	JiJ - Itaulu	1111-220 (01	10)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.335		0.112	0.116	1.00	0.0993	pCi/L	12/01/22 09:07	12/27/22 14:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					12/01/22 09:07	12/27/22 14:14	1

Method: SW846 9320 - Radium-228 (GFPC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.90		0.493	0.523	1.00	0.520	pCi/L	12/01/22 09:29	12/19/22 12:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					12/01/22 09:29	12/19/22 12:15	1
Y Carrier	86.0		40 - 110					12/01/22 09:29	12/19/22 12:15	1

Method: TAL-STL Ra226 Ra228 - Combined Radium-226 and Radium-228

		Count	Total						
		Uncert.	Uncert.						
Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
2.24		0.506	0.536	5.00	0.520	pCi/L		12/28/22 10:36	1
	Result	Result Qualifier	Count Uncert. Result Qualifier (2σ+/-)	Count Total Uncert. Uncert. Result Qualifier (2σ+/-) (2σ+/-)	Count Total Uncert. Uncert. Result Qualifier (2σ+/-) (2σ+/-) RL	Count Total Uncert. Uncert. Result Qualifier (2σ+/-) (2σ+/-) RL MDC	Count Total Uncert. Uncert. Result Qualifier (2σ+/-) (2σ+/-) RL MDC Unit	Count Total Uncert. Uncert. Result Qualifier (2σ+/-) (2σ+/-) RL MDC Unit Prepared	Count Total Uncert. Uncert. Result Qualifier (2σ+/-) (2σ+/-) RL MDC Unit Prepared Analyzed

Client Sample ID: WAP-5I Lab Sample ID: 180-148407-10 Date Collected: 11/16/22 12:20 **Matrix: Water** Date Received: 11/23/22 09:15

	•	0 . ,						
Analyte	Result Qualifi	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20	1.0	0.71	mg/L			11/26/22 18:06	1
Fluoride	0.15	0.10	0.026	mg/L			11/26/22 18:06	1
Sulfate	48	1.0	0.76	mg/L			11/26/22 18:06	1

Wethou: 544046 6020A - Wetais (I	CP/IVIO)	- Total Reco	verable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:18	1
Arsenic	0.061		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:18	1
Barium	0.13		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:18	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:18	1
Boron	0.068		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 14:44	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:18	1

Lab Sample ID: 180-148407-10 **Client Sample ID: WAP-5I**

Date Collected: 11/16/22 12:20 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 6020A - Metals	(ICP/MS)	- Total Rec	overable (C	ontinued	l)				
Analyte		Qualifier	RL [*]		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	40		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:18	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:18	1
Cobalt	0.00066	J	0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:18	1
Lead	0.00085	J	0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 14:44	1
Lithium	0.0019	J	0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:18	1
Molybdenum	0.0016	J	0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:18	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:18	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 14:44	1
- Method: SW846 7470A - Mercur	y (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 11:48	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	230		10	10	mg/L			11/23/22 19:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.7	HE	0.1	0.1	SU			11/28/22 15:11	1

Method: SW846 9	9315 - Radiu	ım-226 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.304		0.123	0.126	1.00	0.146	pCi/L	12/01/22 09:07	12/27/22 14:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					12/01/22 09:07	12/27/22 14:14	1

Method: SW846	9320 - Radiu	ım-228 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.905		0.436	0.444	1.00	0.603	pCi/L	12/01/22 09:29	12/19/22 12:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.6		40 - 110					12/01/22 09:29	12/19/22 12:15	1
Y Carrier	81.9		40 - 110					12/01/22 09:29	12/19/22 12:15	1

Method: TAL-STL F	Ra226_Ra2	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
	_		Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.21		0.453	0.462	5.00	0.603	pCi/L	_	12/28/22 10:36	1

Lab Sample ID: 180-148407-11 **Client Sample ID: WAP-6S** Date Collected: 11/17/22 13:00 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - A	Anions, Ion	Chromato	graphy							
Analyte	Result	Qualifier	F	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36		1	.0	0.71	mg/L			11/26/22 19:19	1

Client Sample Results

Client: Haley & Aldrich, Inc.

Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-6S Lab Sample ID: 180-148407-11

Date Collected: 11/17/22 13:00 Matrix: Water Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - Anions, Ion Chromatography (Continued)										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Fluoride	0.46		0.10	0.026	mg/L			11/26/22 19:19	1	
Sulfate	120		1.0	0.76	mg/L			11/26/22 19:19	1	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:20	1
Arsenic	0.0011	J	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:20	1
Barium	0.049		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:20	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:20	1
Boron	2.4		0.20	0.16	mg/L		11/30/22 12:00	12/02/22 14:46	10
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:20	1
Calcium	93		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:20	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:20	1
Cobalt	0.00090	J	0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:20	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 17:16	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:20	1
Molybdenum	0.12		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:20	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:20	1
Thallium	ND		0.0010	0.00020	ma/L		11/30/22 12:00	12/02/22 17:16	1

Method: SW846 7470A - Mercury (CVAA)										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 11:55	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			11/28/22 15:17	1

Method: SW846	9315 - Radiu	ım-226 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0354	U	0.0730	0.0730	1.00	0.130	pCi/L	12/01/22 09:07	12/27/22 14:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.1	-	40 - 110					12/01/22 09:07	12/27/22 14:14	1

Method: SW846	9320 - Radiu	m-228 (GF	FPC)							
		•	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.704		0.381	0.386	1.00	0.537	pCi/L	12/01/22 09:29	12/19/22 12:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.1		40 - 110					12/01/22 09:29	12/19/22 12:15	1
Y Carrier	87.1		40 - 110					12/01/22 09:29	12/19/22 12:15	1

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Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-6S

Lab Sample ID: 180-148407-11

Matrix: Water

Job ID: 180-148407-1

11/26/22 19:38

Date Collected: 11/17/22 13:00 Date Received: 11/23/22 09:15

				Count	Total						
				Uncert.	Uncert.						
	Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Combined Radium	0.739		0.388	0.393	5.00	0.537	pCi/L	_	12/28/22 10:36	1
ı	226 + 228										

Client Sample ID: WAP-6I Lab Sample ID: 180-148407-12

Date Collected: 11/17/22 11:50 Matrix: Water

1.0

0.76 mg/L

Date Received: 11/23/22 09:15

Sulfate

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			11/26/22 19:38	1
	Fluoride	0.15		0.10	0.026	mg/L			11/26/22 19:38	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:22	1
Arsenic	0.0044	J	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:22	1
Barium	0.15		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:22	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:22	1
Boron	0.085		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 14:49	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:22	1
Calcium	43		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:22	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:22	1
Cobalt	0.00027	J	0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:22	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 14:49	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:22	1
Molybdenum	0.0042	J	0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:22	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:22	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 14:49	1

Method: SW846 7470A - Mercury (CVAA)										
	Analyte	Result Qua	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Mercury	ND	0.20	0.13	ug/L		11/30/22 12:00	12/02/22 11:57	1	

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	240		10	10	mg/L			11/23/22 19:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.9	HF	0.1	0.1	SU			11/28/22 15:22	1

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.218		0.0985	0.100	1.00	0.111	pCi/L	12/01/22 09:07	12/27/22 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					12/01/22 09:07	12/27/22 14:15	1

Client: Haley & Aldrich, Inc. Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

pH (SW846 EPA 9040C)

Lab Sample ID: 180-148407-12 **Client Sample ID: WAP-61**

Date Collected: 11/17/22 11:50 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 9	320 - Radiu	ım-228 (GI	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.44		0.530	0.546	1.00	0.694	pCi/L	12/01/22 09:29	12/19/22 12:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					12/01/22 09:29	12/19/22 12:16	1
Y Carrier	81.5		40 - 110					12/01/22 09:29	12/19/22 12:16	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.66		0.539	0.555	5.00	0.694	pCi/L		12/28/22 10:36	1

Client Sample ID: WAP-6D Lab Sample ID: 180-148407-13 Date Collected: 11/17/22 14:15 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 EPA	9056A - Anions, Ion	Chromatogi	raphy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21		1.0	0.71	mg/L			11/26/22 19:56	1
Fluoride	0.15		0.10	0.026	mg/L			11/26/22 19:56	1
Sulfate	40		1.0	0.76	mg/L			11/26/22 19:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:25	1
Arsenic	0.0046	J	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:25	1
Barium	0.17		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:25	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:25	1
Boron	0.042		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 14:51	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:25	1
Calcium	39		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:25	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:25	1
Cobalt	ND		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:25	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 14:51	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:25	1
Molybdenum	0.0018	J	0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:25	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:25	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 14:51	1

Method: SW846 7470A - Mercury	(CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 11:59	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	230		10	10	mg/L			11/23/22 19:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

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11/28/22 15:28

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Job ID: 180-148407-1 Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-6D

Lab Sample ID: 180-148407-13

Date Collected: 11/17/22 14:15 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 9315 - Radium-226 (GFPC)		
Count	Total	

			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Un	nit	Prepared	Analyzed	Dil Fac
Radium-226	0.385		0.119	0.124	1.00	0.0959 pC	Ci/L	12/01/22 09:07	12/27/22 14:15	1

Carrier %Yield Qualifier Prepared Analyzed 40 - 110 12/01/22 09:07 12/27/22 14:15 Ba Carrier 85.9

Method: SW846 9320 - Radium-228 (GFPC)

Method. SW040 3	320 - Kaulu	111-220 (01	10)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.25		0.478	0.492	1.00	0.603	pCi/L	12/01/22 09:29	12/19/22 12:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.9		40 - 110					12/01/22 09:29	12/19/22 12:16	1
Y Carrier	77.8		40 - 110					12/01/22 09:29	12/19/22 12:16	1

Method: TAL-STL Ra226 Ra228 - Combined Radium-226 and Radium-228

Method. IAL-STET	\azzu_i\a	220 - 00111	Diffed Itaui	uiii-220 aii	u itaului	11-220				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.63		0.493	0.507	5.00	0.603	pCi/L		12/28/22 10:36	1

Client Sample ID: WAP-7S Lab Sample ID: 180-148407-14

Date Collected: 11/22/22 13:00 Date Received: 11/23/22 09:15

Method: SW846 EPA 9056	A - Anions, Ion Cl	hromatography						
Analyte	Result Q	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	79	1.0	0.71	mg/L			11/26/22 20:52	1
Fluoride	0.14	0.10	0.026	mg/L			11/26/22 20:52	1
Sulfate	390	1.0	0.76	mg/L			11/26/22 20:52	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	J	0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:27	1
Arsenic	0.0071		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:27	1
Barium	0.042		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:27	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:27	1
Boron	15		2.0	1.6	mg/L		11/30/22 12:00	12/02/22 14:54	100
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:27	1
Calcium	180		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:27	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:27	1
Cobalt	ND		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:27	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 17:18	1
Lithium	0.16		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:27	1
Molybdenum	0.22		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:27	1
Selenium	0.0050		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:27	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 17:18	1

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Matrix: Water

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-7S

Lab Sample ID: 180-148407-14 Date Collected: 11/22/22 13:00

Matrix: Water

Job ID: 180-148407-1

Date Received: 11/23/22 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 12:01	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	890		10	10	mg/L			11/28/22 15:28	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
		HE	0.1	0.1	SU			11/28/22 15:32	

Method: SW846	9315 - Radiu	ım-226 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.137		0.0788	0.0797	1.00	0.0962	pCi/L	12/01/22 09:07	12/27/22 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					12/01/22 09:07	12/27/22 14:15	1

Method: SW846 9	320 - Radiu	ım-228 (GF	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.647		0.384	0.389	1.00	0.555	pCi/L	12/01/22 09:29	12/19/22 12:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.3		40 - 110					12/01/22 09:29	12/19/22 12:17	1
Y Carrier	81.1		40 - 110					12/01/22 09:29	12/19/22 12:17	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.784		0.392	0.397	5.00	0.555	pCi/L		12/28/22 10:36	1

Client Sample ID: WAP-7D Lab Sample ID: 180-148407-15 Date Collected: 11/22/22 14:00 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - Anions, Ion Chromatography										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	180		2.5	1.8	mg/L			11/26/22 21:10	2.5	
Fluoride	0.52		0.25	0.065	mg/L			11/26/22 21:10	2.5	
Sulfate	1300		2.5	1.9	mg/L			11/26/22 21:10	2.5	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:30	1
Arsenic	0.0010	J	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:30	1
Barium	0.031		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:30	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:30	1
Boron	11		2.0	1.6	mg/L		11/30/22 12:00	12/02/22 14:56	100
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:30	1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-7D

Lab Sample ID: 180-148407-15

Matrix: Water

Job ID: 180-148407-1

Date Collected: 11/22/22 14:00 Date Received: 11/23/22 09:15

Method: SW846 6020A - Metals ((ICP/MS) ·	- Total Reco	overable	(Continued	l)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	360		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:30	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:30	1
Cobalt	0.0037		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:30	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 17:21	1
Lithium	0.050		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:30	1
Molybdenum	0.23		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:30	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:30	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 17:21	1
Method: SW846 7470A - Mercury	(CVAA)								
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 12:03	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2000		20	20	mg/L			11/28/22 15:28	1
Amalusta	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte									

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.377		0.123	0.127	1.00	0.115	pCi/L	12/01/22 09:07	12/27/22 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.7		40 - 110					12/01/22 09:07	12/27/22 14:15	1

Method: SW846	9320 - Radiu	ım-228 (Gl								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.44		0.418	0.439	1.00	0.432	pCi/L	12/01/22 09:29	12/19/22 12:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.7		40 - 110					12/01/22 09:29	12/19/22 12:17	1
Y Carrier	89.7		40 - 110					12/01/22 09:29	12/19/22 12:17	1

Method: TAL-STL F	Ra226_Ra2	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
	_		Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.82		0.436	0.457	5.00	0.432	pCi/L		12/28/22 10:36	1

 Client Sample ID: WAP-8S
 Lab Sample ID: 180-148407-16

 Date Collected: 11/17/22 16:15
 Matrix: Water

 Date Received: 11/23/22 09:15
 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			11/26/22 21:29	1	

Client: Haley & Aldrich, Inc. Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-8S Lab Sample ID: 180-148407-16

Date Collected: 11/17/22 16:15 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - Anions, Ion Chromatography (Continued) MDL Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac **Fluoride** 0.18 0.10 0.026 mg/L 11/26/22 21:29 11/26/22 21:29 **Sulfate** 250 1.0 0.76 mg/L

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable Analyte Result Qualifier **MDL** Unit Prepared Analyzed Dil Fac RL Antimony $\overline{\mathsf{ND}}$ 0.0020 0.00057 mg/L 11/30/22 12:00 12/01/22 15:32 **Arsenic** 0.017 0.0050 0.00075 mg/L 11/30/22 12:00 12/01/22 15:32 **Barium** 0.17 0.0050 0.0022 mg/L 11/30/22 12:00 12/01/22 15:32 12/01/22 15:32 Beryllium ND 0.0010 0.00062 mg/L 11/30/22 12:00 **Boron** 2.3 0.20 0.16 mg/L 11/30/22 12:00 12/02/22 15:04 10 ND 0.0010 0.00020 11/30/22 12:00 12/01/22 15:32 Cadmium mg/L 11/30/22 12:00 12/01/22 15:32 **Calcium** 120 1.0 0.58 mg/L 11/30/22 12:00 12/01/22 15:32 Chromium ND 0.0050 0.0025 mg/L 0.0010 0.00019 mg/L 11/30/22 12:00 12/01/22 15:32 Cobalt 0.00099 12/02/22 17:23 Lead ND 0.0010 0.00045 mg/L 11/30/22 12:00 Lithium 0.0080 0.0017 mg/L 11/30/22 12:00 12/01/22 15:32 0.022 12/01/22 15:32 Molybdenum 0.24 0.0050 0.0011 mg/L 11/30/22 12:00 Selenium ND 0.0050 0.00089 mg/L 11/30/22 12:00 12/01/22 15:32 Thallium ND 0.0010 0.00020 mg/L 11/30/22 12:00 12/02/22 17:23

Method: SW846 7470A - Mercury (CVAA) RL MDL Unit **Analyte** Result Qualifier D Prepared Analyzed Dil Fac Mercury $\overline{\mathsf{ND}}$ 0.20 0.13 ug/L 11/30/22 12:00 12/02/22 12:05

General Chemistry RL Dil Fac Analyte Result Qualifier MDI Unit D Prepared Analyzed Total Dissolved Solids (SM 2540C) 730 10 10 mg/L 11/23/22 19:50 Result Qualifier Analyte RI RI Unit D Prepared Analyzed Dil Fac pH (SW846 EPA 9040C) 7.8 HF 0.1 0.1 SU 11/28/22 15:47

Method: SW846 9315 - Radium-226 (GFPC) Count Total Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 0.100 0.102 1.00 0.115 pCi/L 12/01/22 09:07 12/27/22 14:16 0.226 Carrier Qualifier Limits Dil Fac %Yield Prepared Analyzed 40 - 110 12/01/22 09:07 12/27/22 14:16 Ba Carrier 91.0

Method: SW846 9320 - Radium-228 (GFPC) Total Count Uncert. Uncert. Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ **MDC** Unit Analyte Result RL Prepared Analyzed Dil Fac Radium-228 0.452 0.467 1.00 0.529 pCi/L 12/01/22 09:29 12/19/22 12:17 1.29 Carrier %Yield Qualifier Limits Prepared Dil Fac Analyzed 12/19/22 12:17 40 - 110 12/01/22 09:29 Ba Carrier 91.0 Y Carrier 74.8 40 - 110 12/01/22 09:29 12/19/22 12:17

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Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-8S

Lab Sample ID: 180-148407-16

Matrix: Water

Date Collected: 11/17/22 16:15 Date Received: 11/23/22 09:15

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.51		0.463	0.478	5.00	0.529	pCi/L		12/28/22 10:36	1
226 + 228										

Client Sample ID: WAP-8I Lab Sample ID: 180-148407-17

Date Collected: 11/18/22 11:05 **Matrix: Water**

Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - A	Anions, Ion Chromatography

		,atog.apy						
Analyte	Result Quali	lifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21	1.0	0.71	mg/L			11/26/22 21:47	1
Fluoride	0.20	0.10	0.026	mg/L			11/26/22 21:47	1
Sulfate	50	1.0	0.76	mg/L			11/26/22 21:47	1

Assista	,			MDI	11!4	_	Duamanad	A a l a al	Dil Faa
Analyte	Result	Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:40	1
Arsenic	0.0037	J	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:40	1
Barium	0.049		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:40	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:40	1
Boron	0.071		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 15:06	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:40	1
Calcium	45		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:40	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:40	1
Cobalt	0.00042	J	0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:40	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 15:06	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:40	1
Molybdenum	0.024		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:40	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:40	1
Thallium	ND		0.0010	0.00020	ma/l		11/30/22 12:00	12/02/22 15:06	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ua/L		11/30/22 12:00	12/02/22 12:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	260		10	10	mg/L			11/23/22 19:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 FPA 9040C)	7.9	HE	0.1	0.1	SU			11/28/22 15:59	1

Method: SW846 9315 - Radium-226 (GFPC)

		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.207		0.0917	0.0936	1.00	0.0912	pCi/L	12/01/22 09:07	12/27/22 14:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					12/01/22 09:07	12/27/22 14:16	1

Client: Haley & Aldrich, Inc. Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-8I Lab Sample ID: 180-148407-17

Date Collected: 11/18/22 11:05 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846	9320 - Radiu	ım-228 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.63		0.503	0.525	1.00	0.585	pCi/L	12/01/22 09:29	12/19/22 12:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.2		40 - 110					12/01/22 09:29	12/19/22 12:17	1
Y Carrier	83.4		40 - 110					12/01/22 09:29	12/19/22 12:17	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.84		0.511	0.533	5.00	0.585	pCi/L		12/28/22 10:36	1

Lab Sample ID: 180-148407-18 **Client Sample ID: WAP-8D** Date Collected: 11/18/22 12:40 **Matrix: Water** Date Received: 11/23/22 09:15

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			11/26/22 22:05	1
Fluoride	0.17		0.10	0.026	mg/L			11/26/22 22:05	1
Sulfate	45		1.0	0.76	mg/L			11/26/22 22:05	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:42	1
Arsenic	0.0025	J	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:42	1
Barium	0.062		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:42	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:42	1
Boron	0.046		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 15:08	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:42	1
Calcium	42		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:42	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:42	1
Cobalt	ND		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:42	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 15:08	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:42	1
Molybdenum	0.0012	J	0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:42	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:42	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 15:08	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 12:09	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	220		10	10	mg/L			11/23/22 19:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7 9	HE	0.1	0.1	SU			11/28/22 16:04	1

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

Lab Sample ID: 180-148407-18 **Client Sample ID: WAP-8D**

Date Collected: 11/18/22 12:40 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 9315 -	- Radium-226	(GFPC)
		_

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.212		0.0893	0.0913	1.00	0.0918	pCi/L	12/01/22 09:07	12/27/22 14:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					12/01/22 09:07	12/27/22 14:16	1

Method: SW846 9320 - Radium-228 (GFPC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.24		0.409	0.425	1.00	0.488	pCi/L	12/01/22 09:29	12/19/22 12:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					12/01/22 09:29	12/19/22 12:17	1
Y Carrier	87.5		40 - 110					12/01/22 09:29	12/19/22 12:17	1

Method: TAL-STL Ra226 Ra228 - Combined Radium-226 and Radium-228

				u	a					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.46		0.419	0.435	5.00	0.488	pCi/L		12/28/22 10:36	1

Lab Sample ID: 180-148407-19 **Client Sample ID: WAP-9S** Date Collected: 11/18/22 16:00 **Matrix: Water**

Date Received: 11/23/22 09:15

Method: SW846 EPA 905	56A - Anions, Ion Chr	romatography						
Analyte	Result Qua	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24	1.0	0.71	mg/L			11/26/22 22:24	1
Fluoride	0.79	0.10	0.026	mg/L			11/26/22 22:24	1
Sulfate	40	1.0	0.76	mg/L			11/26/22 22:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:45	1
Arsenic	0.0024	J	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:45	1
Barium	0.10		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:45	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:45	1
Boron	1.1		0.20	0.16	mg/L		11/30/22 12:00	12/02/22 15:11	10
Cadmium	0.00028	J	0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:45	1
Calcium	69		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:45	1
Chromium	0.0056		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:45	1
Cobalt	0.0026		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:45	1
Lead	0.0025		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 17:26	1
Lithium	0.0091		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:45	1
Molybdenum	0.13		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:45	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:45	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 17:26	1

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Client Sample ID: WAP-9S Lab Sample ID: 180-148407-19

Date Collected: 11/18/22 16:00 Date Received: 11/23/22 09:15

Matrix: Water

Job ID: 180-148407-1

Method: SW846 7470A - Merc	cury (CVAA)	
Analyte	Result	Qua

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 12:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	610		10	10	mg/L			11/23/22 19:50	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

Method: SW846 9315 - Radium-226 (GFPC)

Method. Offoro	15 - Itauic	IIII-220 (GI	10)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.245	U	0.200	0.201	1.00	0.300	pCi/L	12/02/22 09:26	12/27/22 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		40 - 110					12/02/22 09:26	12/27/22 14:19	1

20 - Kaulu	IIII-220 (GI	-PC)							
		Count	Total						
		Uncert.	Uncert.						
Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
1.01	UG	0.772	0.778	1.00	1.18	pCi/L	12/02/22 09:55	12/19/22 12:19	1
%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
78.2		40 - 110					12/02/22 09:55	12/19/22 12:19	1
89.0		40 - 110					12/02/22 09:55	12/19/22 12:19	1
	Result 1.01	Result Qualifier 1.01 U G %Yield Qualifier 78.2	Result 1.01 Qualifier Uncert. (2σ+/-) U G 78.2 Uncert. (2σ+/-) U G Uncert. (2σ+/-) U G 0.772 WYield Qualifier Units 40 - 110 Limits 40 - 110	Result 1.01 Qualifier U G (2σ+/-) (2σ+/-) (2σ+/-) (2σ+/-) 0.772 0.778 %Yield 78.2 Qualifier Limits 40 - 110 40 - 110	Result Qualifier (2σ+/-) (2σ+/-) RL 1.01 UG 0.772 0.778 1.00 %Yield Qualifier Limits 78.2 40 - 110	Result 1.01 Qualifier Uncert. (2σ+/-) (2σ+/-	Count Uncert. Uncert. Uncert.	Result 1.01 Qualifier UG (2σ+/-) (2σ	Result Qualifier (2σ+/-) (2σ+/-) RL MDC Unit Prepared Analyzed 1.01 U G 0.772 0.778 1.00 1.18 pCi/L 12/02/22 09:55 12/19/22 12:19 8Yield Qualifier Limits Prepared Analyzed 78.2 40 - 110 12/02/22 09:55 12/19/22 12:19

Method: TAL-STL Ra226 Ra228 - Combined Radium-226 and Radium-228

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.26		0.797	0.804	5.00	1.18	pCi/L		12/28/22 10:36	1

Client Sample ID: WAP-9I

Lab Sample ID: 180-148407-20 Date Collected: 11/22/22 13:06 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		1.0	0.71	mg/L			11/26/22 23:19	1
Fluoride	0.14		0.10	0.026	mg/L			11/29/22 18:40	1
Sulfate	41		1.0	0.76	mg/L			11/26/22 23:19	1

Method: 544846 6020A - Metals (I	CP/IVIS)	- Total Recov	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:47	1
Arsenic	0.0060		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:47	1
Barium	0.10		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:47	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:47	1
Boron	0.13		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 15:13	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:47	1

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-9I

Lab Sample ID: 180-148407-20

Matrix: Water

Date Collected: 11/22/22 13:06 Date Received: 11/23/22 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	45		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:47	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:47	1
Cobalt	0.00028	J	0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:47	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 15:13	1
Lithium	0.0017	J	0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:47	1
Molybdenum	0.013		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:47	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:47	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 15:13	1
Method: SW846 7470A - Mercury	(CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 12:13	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	240		10	10	mg/L			11/28/22 15:28	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	8.0	HF	0.1	0.1	SU			11/28/22 16:16	

Method: SW846	9315 - Radiu	ım-226 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.135	U	0.0982	0.0990	1.00	0.144	pCi/L	12/02/22 09:26	12/27/22 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.7		40 - 110					12/02/22 09:26	12/27/22 14:19	1

Method: SW846 93	20 - Radiu	ım-228 (GF	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.410	U	0.324	0.327	1.00	0.501	pCi/L	12/02/22 09:55	12/19/22 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.7		40 - 110					12/02/22 09:55	12/19/22 12:20	1
Y Carrier	88.6		40 - 110					12/02/22 09:55	12/19/22 12:20	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
	_		Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.545		0.339	0.342	5.00	0.501	pCi/L		12/28/22 10:36	1

Client Sample ID: WAP-9D

Date Collected: 11/22/22 16:30

Date Received: 11/23/22 09:15

Lab Sample ID: 180-148407-21

Matrix: Water

Method: SW846 EPA 9056A - A	Anions, Ion	Chromato	graphy							
Analyte	Result	Qualifier	İ	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		-	1.0	0.71	mg/L			11/27/22 00:51	1

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

Method: SW846 7470A - Mercury (CVAA)

Lab Sample ID: 180-148407-21 **Client Sample ID: WAP-9D**

Date Collected: 11/22/22 16:30

Matrix: Water

Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A	- Anions, Ion	Chromatogi	raphy (Con						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.31		0.10	0.026	mg/L			11/29/22 16:31	1
Sulfate	39		1.0	0.76	mg/L			11/27/22 00:51	1

Method: SW846 6020A -	Metals (ICP/MS) -	Total Reco	verable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 16:23	1
Arsenic	0.0086		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 16:23	1
Barium	0.17		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 16:23	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 16:23	1
Boron	0.15		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 13:53	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 16:23	1
Calcium	36		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 16:23	1
Chromium	0.0048	J	0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 16:23	1
Cobalt	0.0018		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 16:23	1
Lead	0.0020		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 13:53	1
Lithium	0.0047	J	0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 16:23	1
Molybdenum	0.0086		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 16:23	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 16:23	1
Thallium	0.00063	J	0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 13:53	1

Analyte	Result	Qualifier	KL	MDL	Unit	D	Prepared	Analyzea	DII Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/01/22 14:03	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	290		10	10	mg/L			11/28/22 17:36	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.8	HF	0.1	0.1	SU			11/28/22 16:22	1

Method: SW846	9315 - Radiu	ım-226 (GF	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.456		0.254	0.257	1.00	0.312	pCi/L	12/02/22 09:26	12/27/22 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	56.1		40 - 110					12/02/22 09:26	12/27/22 14:19	1

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.10	UG	0.978	0.983	1.00	1.53	pCi/L	12/02/22 09:55	12/19/22 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	56.1		40 - 110					12/02/22 09:55	12/19/22 12:20	1
Y Carrier	86.4		40 - 110					12/02/22 09:55	12/19/22 12:20	1

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-9D Lab Sample ID: 180-148407-21

Date Collected: 11/22/22 16:30 **Matrix: Water** Date Received: 11/23/22 09:15

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.56		1.01	1.02	5.00	1.53	pCi/L		12/28/22 10:36	1
226 + 228										

Client Sample ID: FIELD BLANK Lab Sample ID: 180-148407-22

Date Collected: 11/21/22 11:45 **Matrix: Water**

Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Method. Offoro El A 3000A - Allic	,, ion	Omomatograp	'iiy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			11/27/22 01:10	1
Fluoride	ND		0.10	0.026	mg/L			11/29/22 16:49	1
Sulfate	ND		1.0	0.76	mg/L			11/27/22 01:10	1
_									

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

Michiga. Offoro 00207	4 - Metais (IOI /MO)	- Iotai itee	Overable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 16:25	1
Arsenic	ND		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 16:25	1
Barium	ND		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 16:25	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 16:25	1
Boron	ND		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 13:55	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 16:25	1
Calcium	ND		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 16:25	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 16:25	1
Cobalt	ND		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 16:25	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 13:55	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 16:25	1
Molybdenum	ND		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 16:25	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 16:25	1
Thallium	0.00025	J	0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 13:55	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.20	0.13 ug/L		11/30/22 12:00	12/01/22 14:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	ND		10	10	mg/L			11/28/22 17:36	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	6.0	HE	0.1	0.1	SU			11/28/22 16:27	1

Method: SW846 9315 - Radium-226 (GFPC)

mountain one of		\	. •,							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0207	U	0.0551	0.0552	1.00	0.104	pCi/L	12/02/22 09:26	12/27/22 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.0		40 - 110					12/02/22 09:26	12/27/22 14:19	1

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

Client Sample ID: FIELD BLANK

Lab Sample ID: 180-148407-22 Date Collected: 11/21/22 11:45 **Matrix: Water**

Date Received: 11/23/22 09:15

Method: SW846 9320 - Radium-228 (GFPC)

Welliou. Syvo40 3	320 - Kaulu	III-220 (GI	-PG)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.348	U	0.297	0.299	1.00	0.462	pCi/L	12/02/22 09:55	12/19/22 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.0		40 - 110					12/02/22 09:55	12/19/22 12:20	1
Y Carrier	85.6		40 - 110					12/02/22 09:55	12/19/22 12:20	1

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

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.369	U	0.302	0.304	5.00	0.462	pCi/L		12/28/22 10:36	1
+ 228										

Client Sample ID: BLIND DUP 1

Lab Sample ID: 180-148407-23 Date Collected: 11/21/22 00:01 **Matrix: Water**

Date Received: 11/23/22 09:15

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	Result Qualifier	KL	MDL	Unit	D	Prepared	Anaiyzea	DII Fac
Chloride	58	1.0	0.71	mg/L			11/27/22 01:28	1
Fluoride	0.30	0.10	0.026	mg/L			11/29/22 18:03	1
Sulfate	380	1.0	0.76	mg/L			11/27/22 01:28	1
_	Martin (IOD/MO) Tarril Day							

Analyte	Result Q	Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 16:28	1
Arsenic	ND	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 16:28	1
Barium	0.021	0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 16:28	1
Beryllium	ND	0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 16:28	1
Boron	4.9	0.40	0.32	mg/L		11/30/22 12:00	12/02/22 13:58	20
Cadmium	ND	0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 16:28	1
Calcium	170	1.0	0.58	mg/L		11/30/22 12:00	12/01/22 16:28	1
Chromium	ND	0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 16:28	1
Cobalt	0.0013	0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 16:28	1
Lead	ND	0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 17:33	1
Lithium	0.079	0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 16:28	1
Molybdenum	0.29	0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 16:28	1
Selenium	ND	0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 16:28	1
Thallium	ND	0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 17:33	1

Method: SW846 7470A - Merci	ury (CVAA)						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND -	0.20	0.13 ug/L		11/30/22 12:00	12/01/22 14:07	1

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	860		10	10	mg/L			11/28/22 17:36	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.9	HF	0.1	0.1	SU			11/28/22 16:32	1

Eurofins Pittsburgh

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Client Sample ID: BLIND DUP 1

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-148407-23

Matrix: Water

Date Collected: 11/21/22 00:01 Date Received: 11/23/22 09:15

Client: Haley & Aldrich, Inc.

Method: SW846 9	315 - Radiu	ım-226 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.152		0.0861	0.0872	1.00	0.111	pCi/L	12/02/22 09:26	12/27/22 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		40 - 110					12/02/22 09:26	12/27/22 14:20	1

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.826		0.406	0.413	1.00	0.559	pCi/L	12/02/22 09:55	12/19/22 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		40 - 110					12/02/22 09:55	12/19/22 12:20	1
Y Carrier	77.4		40 - 110					12/02/22 09:55	12/19/22 12:20	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.978		0.415	0.422	5.00	0.559	pCi/L		12/28/22 10:36	1

Client Sample ID: BLIND DUP 2 Lab Sample ID: 180-148407-24 Date Collected: 11/22/22 00:01 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 EPA	9056A - Anions, Ion	Chromatogi	raphy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		1.0	0.71	mg/L			11/27/22 01:47	1
Fluoride	0.14		0.10	0.026	mg/L			11/29/22 18:22	1
Sulfate	42		1.0	0.76	mg/L			11/27/22 01:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 16:30	1
Arsenic	0.0059		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 16:30	1
Barium	0.10		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 16:30	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 16:30	1
Boron	0.13		0.020	0.016	mg/L		11/30/22 12:00	12/02/22 14:05	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 16:30	1
Calcium	45		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 16:30	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 16:30	1
Cobalt	0.00026	J	0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 16:30	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 14:05	1
Lithium	0.0017	J	0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 16:30	1
Molybdenum	0.013		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 16:30	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 16:30	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 14:05	1

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

Client Sample ID: BLIND DUP 2

Date Collected: 11/22/22 00:01 Date Received: 11/23/22 09:15

pH (SW846 EPA 9040C)

Lab Sample ID: 180-148407-24

Matrix: Water

11/28/22 16:38

Method: SW846 7470A - Mercur	y (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/01/22 14:09	1
General Chemistry Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	240		10	10	mg/L			11/28/22 15:28	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

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Method: SW846 9	315 - Radiu	m-226 (GI	FPC)							
		•	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.123	U	0.0873	0.0880	1.00	0.126	pCi/L	12/02/22 09:26	12/27/22 14:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.4		40 - 110					12/02/22 09:26	12/27/22 14:20	1

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Method: SW846	9320 - Radiu	ım-228 (GF	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.241	U	0.315	0.316	1.00	0.525	pCi/L	12/02/22 09:55	12/19/22 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.4		40 - 110					12/02/22 09:55	12/19/22 12:20	1
Y Carrier	76.6		40 - 110					12/02/22 09:55	12/19/22 12:20	1

Method: TAL-STL R	a226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.364	U	0.327	0.328	5.00	0.525	pCi/L		12/28/22 10:36	1

Client Sample ID: CCR-AP-7 Lab Sample ID: 180-148407-25 Date Collected: 11/22/22 10:10 **Matrix: Water** Date Received: 11/23/22 09:15

Method: SW846 EPA	9056A - Anions, Ion	Chromatogi	raphy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30		1.0	0.71	mg/L			11/26/22 18:24	1
Fluoride	0.48		0.10	0.026	mg/L			11/26/22 18:24	1
Sulfate	76		1.0	0.76	mg/L			11/26/22 18:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 16:02	1
Arsenic	0.0040	J	0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 16:02	1
Barium	0.10		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 16:02	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 16:02	1
Boron	0.049	F1	0.020	0.016	mg/L		11/30/22 12:00	12/02/22 13:41	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 16:02	1

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

Client Sample ID: CCR-AP-7 Lab Sample ID: 180-148407-25

Date Collected: 11/22/22 10:10 **Matrix: Water**

Date Received: 11/23/22 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	110		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 16:02	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 16:02	1
Cobalt	0.00087	J	0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 16:02	1
Lead	0.00082	J	0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 13:41	1
Lithium	0.0070	J	0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 16:02	1
Molybdenum	0.0014	J	0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 16:02	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 16:02	1
Thallium	0.00039	J	0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 13:41	1
Method: SW846 7470A - Mercury	(CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/01/22 13:56	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	580		10	10	mg/L			11/28/22 15:28	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.7	HE	0.1	0.1	SU			11/28/22 16:51	

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.250		0.131	0.133	1.00	0.169	pCi/L	12/02/22 09:26	12/27/22 16:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		40 - 110					12/02/22 09:26	12/27/22 16:36	1

Method: SW846	9320 - Radiu	m-228 (GI	FPC)							
		•	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.08		0.533	0.543	1.00	0.715	pCi/L	12/02/22 09:55	12/19/22 12:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		40 - 110					12/02/22 09:55	12/19/22 12:20	1
Y Carrier	74.8		40 - 110					12/02/22 09:55	12/19/22 12:20	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
	_		Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.33		0.549	0.559	5.00	0.715	pCi/L	-	12/28/22 10:36	1

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-419148/36

Matrix: Water

Analyte

Chloride

Fluoride

Sulfate

Analysis Batch: 419148

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

11/26/22 22:42

MB MB Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac D ND 1.0 0.71 mg/L 11/26/22 22:42 ND 0.10 0.026 mg/L 11/26/22 22:42

0.76 mg/L

Lab Sample ID: MB 180-419148/6 Client Sample ID: Method Blank

ND

Matrix: Water

Analysis Batch: 419148

Prep Type: Total/NA

MB MB Analyte Result Qualifier RL **MDL** Unit D **Prepared** Dil Fac Analyzed Chloride 1.0 0.71 mg/L ND 11/26/22 10:56 Fluoride 0.10 ND 0.026 mg/L 11/26/22 10:56 Sulfate ND 0.76 mg/L 11/26/22 10:56 1.0

1.0

Lab Sample ID: LCS 180-419148/37 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 419148

Spike LCS LCS %Rec Added Result Qualifier Limits Analyte Unit D %Rec Chloride 50.0 52.9 mg/L 106 80 - 120 Fluoride 2.50 2.72 mg/L 109 80 - 120 50.0 51.7 mg/L Sulfate 103 80 - 120

Lab Sample ID: LCS 180-419148/7 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 419148

	Spike	LCS	LCS			%Rec	
Analyte	Added	Result	Qualifier	Unit	D %Rec	Limits	
Chloride	50.0	51.8		mg/L	104	80 - 120	
Fluoride	2.50	2.69		mg/L	108	80 - 120	
Sulfate	50.0	50.7		mg/L	101	80 - 120	

Lab Sample ID: 180-148407-6 MS Client Sample ID: WAP-4I **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 419148

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	21		50.0	71.4		mg/L		101	80 - 120	
Fluoride	0.15		2.50	2.80		mg/L		106	80 - 120	
Sulfate	49		50.0	98.0		mg/L		97	80 - 120	

Lab Sample ID: 180-148407-6 MSD Client Sample ID: WAP-4I **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 419148

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	21		50.0	71.4		mg/L		101	80 - 120	0	15
Fluoride	0.15		2.50	2.80		mg/L		106	80 - 120	0	15
Sulfate	49		50.0	97.3		mg/L		96	80 - 120	1	15

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Method: EPA 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 180-148407-20 MS

Matrix: Water

Analysis Batch: 419148

Client Sample ID: WAP-9I Prep Type: Total/NA

Sample Sample Spike MS MS %Rec Analyte **Result Qualifier** Added Result Qualifier Unit D %Rec Limits Chloride 20 50.0 70.7 mg/L 102 80 - 120 Sulfate 41 50.0 90.6 mg/L 98 80 - 120

Lab Sample ID: 180-148407-20 MSD

Matrix: Water

Analysis Batch: 419148

Alialysis Dalcii. 413140												
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	20		50.0	70.9		mg/L		102	80 - 120	0	15	
Sulfate	41		50.0	90.5		mg/L		98	80 - 120	0	15	

Lab Sample ID: 180-148407-25 MS

Matrix: Water

Analysis Batch: 419148

_	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	30		50.0	80.7		mg/L		101	80 - 120	
Fluoride	0.48		2.50	3.07		mg/L		104	80 - 120	
Sulfate	76		50.0	123		mg/L		94	80 - 120	

Lab Sample ID: 180-148407-25 MSD

Matrix: Water

Analysis Batch: 419148

, , , , , , , , , , , , , , , , , , , ,	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	30		50.0	80.9		mg/L		101	80 - 120	0	15
Fluoride	0.48		2.50	3.07		mg/L		104	80 - 120	0	15
Sulfate	76		50.0	123		mg/L		94	80 - 120	0	15

Lab Sample ID: MB 180-419311/6	Client Sample ID: Method Blank
Matrix: Water	Prep Type: Total/NA
Analysis Batch: 419311	
MB MB	

		-					
Analyte	Result Q	ualifier RL	MDL	Unit	D Prepared	Analyzed	Dil Fac
Chloride	ND	1.0	0.71	mg/L		11/29/22 12:05	1
Fluoride	ND	0.10	0.026	mg/L		11/29/22 12:05	1
Sulfate	ND	1.0	0.76	mg/L		11/29/22 12:05	1

Lab Sample ID: LCS 180-419311/7

Matrix: Water

Analysis Ratch: 410311

Analysis batch: 419311							
	Spike	LCS	LCS			%Rec	
Analyte	Added	Result	Qualifier L	Jnit D	%Rec	Limits	
Chloride	50.0	51.9	n	ng/L	104	80 - 120	
Fluoride	2.50	2.63	n	ng/L	105	80 - 120	
Sulfate	50.0	50.7	n	ng/L	101	80 - 120	

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Prep Type: Total/NA

Client Sample ID: WAP-9I Prep Type: Total/NA

Client Sample ID: CCR-AP-7

Client Sample ID: CCR-AP-7

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Type: Total/NA

Project/Site: CCR Groundwater Monitoring

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 240-553966/1-A

Matrix: Water

Analysis Batch: 554304

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 553966

Job ID: 180-148407-1

								•	
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 14:29	1
Arsenic	ND		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 14:29	1
Barium	ND		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 14:29	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 14:29	1
Boron	ND		0.020	0.016	mg/L		11/30/22 12:00	12/01/22 14:29	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 14:29	1
Calcium	ND		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 14:29	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 14:29	1
Cobalt	ND		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 14:29	1
Lead	ND		0.0010	0.00045	mg/L		11/30/22 12:00	12/01/22 14:29	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 14:29	1
Molybdenum	ND		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 14:29	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 14:29	1
Thallium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 14:29	1

Lab Sample ID: LCS 240-553966/2-A

Matrix: Water

Analysis Batch: 554304

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

Prep Batch: 553966

_	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	0.100	0.102		mg/L		102	80 - 120	
Arsenic	1.00	0.911		mg/L		91	80 - 120	
Barium	1.00	0.897		mg/L		90	80 - 120	
Beryllium	0.500	0.461		mg/L		92	80 - 120	
Boron	0.100	0.0891		mg/L		89	80 - 120	
Cadmium	0.500	0.479		mg/L		96	80 - 120	
Calcium	25.0	24.6		mg/L		98	80 - 120	
Chromium	0.500	0.490		mg/L		98	80 - 120	
Cobalt	0.500	0.470		mg/L		94	80 - 120	
Lead	0.500	0.480		mg/L		96	80 - 120	
Lithium	0.500	0.462		mg/L		92	80 - 120	
Molybdenum	0.500	0.467		mg/L		93	80 - 120	
Selenium	1.00	0.903		mg/L		90	80 - 120	
Thallium	1.00	0.946		mg/L		95	80 - 120	

Lab Sample ID: 180-148407-6 MS

Matrix: Water

Analysis Batch: 554304

Client Sample ID: WAP-4I Prep Type: Total Recoverable

Prep Batch: 553966

_	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	ND		0.100	0.0994		mg/L		99	75 - 125	
Arsenic	0.0069		1.00	0.883		mg/L		88	75 - 125	
Barium	0.17		1.00	1.08		mg/L		91	75 - 125	
Beryllium	ND		0.500	0.449		mg/L		90	75 - 125	
Cadmium	ND		0.500	0.465		mg/L		93	75 - 125	
Calcium	41		25.0	63.5		mg/L		91	75 - 125	
Chromium	ND		0.500	0.475		mg/L		95	75 - 125	
Cobalt	0.00043	J	0.500	0.451		mg/L		90	75 - 125	
Molybdenum	0.0018	J	0.500	0.459		mg/L		91	75 - 125	

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Client Sample ID: WAP-4I

75 - 125

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Method: 6020A - Metals (ICP/MS) (Continued)

ND

ND

Lab Sample ID: 180-148407-6 MS

Matrix: Water

Analysis Batch: 554304

Client Sample ID: WAP-4I **Prep Type: Total Recoverable Prep Batch: 553966** %Rec MS MS Sample Sample Spike

0.930

Analyte	Result Qualifier	Added	Result	Qualifier Unit	D	%Rec	Limits
Selenium	ND ND	1.00	0.874	mg/L	_	87	75 - 125

Lab Sample ID: 180-148407-6 MS

Matrix: Water	F	Prep Ty	pe: Total	Recoverable						
Analysis Batch: 554512									Prep Ba	atch: 553966
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Boron	0.071		0.100	0.163		mg/L		92	75 - 125	
Lead	ND		0.500	0.480		mg/L		96	75 - 125	

1.00

Lab Sample ID: 180-148407-6 MSD

Matrix: Water

Thallium

Analysis Batch: 554304

							ent Sampl pe: Total			
	Cmilro.	Med	MeD		•	icp iy	Prep B		53966	
	Spike	MISD	MSD				%Rec		RPD	
r	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	

mg/L

mg/L

								i ich De	itoii. o	,0000
Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
ND		0.100	0.0980		mg/L		98	75 - 125	1	20
0.0069		1.00	0.891		mg/L		88	75 - 125	1	20
0.17		1.00	1.07		mg/L		90	75 - 125	0	20
ND		0.500	0.454		mg/L		91	75 - 125	1	20
ND		0.500	0.463		mg/L		93	75 - 125	0	20
41		25.0	64.3		mg/L		95	75 - 125	1	20
ND		0.500	0.481		mg/L		96	75 - 125	1	20
0.00043	J	0.500	0.451		mg/L		90	75 - 125	0	20
0.0018	J	0.500	0.465		mg/L		93	75 - 125	1	20
ND		1.00	0.882		mg/L		88	75 - 125	1	20
	Result ND 0.0069 0.17 ND ND 41 ND 0.00043 0.00043	0.0069 0.17 ND ND 41 ND 0.00043 J 0.0018 J	Result Qualifier Added ND 0.100 0.0069 1.00 0.17 1.00 ND 0.500 ND 0.500 41 25.0 ND 0.500 0.00043 J 0.500 0.0018 J 0.500	Result Qualifier Added Result ND 0.100 0.0980 0.0069 1.00 0.891 0.17 1.00 1.07 ND 0.500 0.454 ND 0.500 0.463 41 25.0 64.3 ND 0.500 0.481 0.00043 J 0.500 0.451 0.0018 J 0.500 0.465	Result Qualifier Added Result Qualifier ND 0.100 0.0980 0.0069 1.00 0.891 0.17 1.00 1.07 ND 0.500 0.454 ND 0.500 0.463 41 25.0 64.3 ND 0.500 0.481 0.00043 J 0.500 0.451 0.0018 J 0.500 0.465	Result Qualifier Added Result Qualifier Unit ND 0.100 0.0980 mg/L 0.0069 1.00 0.891 mg/L 0.17 1.00 1.07 mg/L ND 0.500 0.454 mg/L ND 0.500 0.463 mg/L 41 25.0 64.3 mg/L ND 0.500 0.481 mg/L 0.00043 J 0.500 0.451 mg/L 0.0018 J 0.500 0.465 mg/L	Result Qualifier Added Result Qualifier Unit D ND 0.100 0.0980 mg/L mg/L 0.0069 1.00 0.891 mg/L 0.17 1.00 1.07 mg/L ND 0.500 0.454 mg/L ND 0.500 0.463 mg/L 41 25.0 64.3 mg/L ND 0.500 0.481 mg/L 0.00043 J 0.500 0.451 mg/L 0.0018 J 0.500 0.465 mg/L	Result Qualifier Added Result Qualifier Unit D %Rec ND 0.100 0.0980 mg/L 98 0.0069 1.00 0.891 mg/L 88 0.17 1.00 1.07 mg/L 90 ND 0.500 0.454 mg/L 91 ND 0.500 0.463 mg/L 93 41 25.0 64.3 mg/L 95 ND 0.500 0.481 mg/L 96 0.00043 J 0.500 0.451 mg/L 90 0.0018 J 0.500 0.465 mg/L 93	Sample Result Sample Qualifier Added Added Result MSD Qualifier Unit Unit Unit Unit Unit Unit Unit Unit	Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD ND 0.100 0.0980 mg/L 98 75 - 125 1 0.0069 1.00 0.891 mg/L 88 75 - 125 1 0.17 1.00 1.07 mg/L 90 75 - 125 0 ND 0.500 0.454 mg/L 91 75 - 125 1 ND 0.500 0.463 mg/L 93 75 - 125 1 ND 0.500 64.3 mg/L 95 75 - 125 1 ND 0.500 0.481 mg/L 96 75 - 125 1 0.00043 J 0.500 0.451 mg/L 90 75 - 125 0 0.0018 J 0.500 0.465 mg/L 93 75 - 125 1

Lab Sample ID: 180-148407-6 MSD

Matrix: Water							F	rep Ty	pe: Total	Recove	erable
Analysis Batch: 554512									Prep Ba	atch: 5	53966
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	0.071		0.100	0.164		mg/L		93	75 - 125	0	20
Lead	ND		0.500	0.485		mg/L		97	75 - 125	1	20

0.951

1.00

Lab Sample ID: MB 240-553976/1-A

Matrix: Water

Thallium

Analysis Batch: 554304

Client Sample ID: Method Blank	
Prep Type: Total Recoverable	
Prep Batch: 553976	

75 - 125

Client Sample ID: WAP-4I

	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	MD		0.0020	0.00057	mg/L		11/30/22 12:00	12/01/22 15:57	1
Arsenic	ND		0.0050	0.00075	mg/L		11/30/22 12:00	12/01/22 15:57	1
Barium	ND		0.0050	0.0022	mg/L		11/30/22 12:00	12/01/22 15:57	1
Beryllium	ND		0.0010	0.00062	mg/L		11/30/22 12:00	12/01/22 15:57	1
Cadmium	ND		0.0010	0.00020	mg/L		11/30/22 12:00	12/01/22 15:57	1
Calcium	ND		1.0	0.58	mg/L		11/30/22 12:00	12/01/22 15:57	1
Chromium	ND		0.0050	0.0025	mg/L		11/30/22 12:00	12/01/22 15:57	1
Cobalt	ND		0.0010	0.00019	mg/L		11/30/22 12:00	12/01/22 15:57	1
Lithium	ND		0.0080	0.0017	mg/L		11/30/22 12:00	12/01/22 15:57	1

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Project/Site: CCR Groundwater Monitoring

Method: 6020A - Metals (ICP/MS) (Continued)

MB MB

Lab Sample ID: MB 240-553976/1-A

Matrix: Water

Analysis Batch: 554304

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

Prep Batch: 553976

Job ID: 180-148407-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	ND		0.0050	0.0011	mg/L		11/30/22 12:00	12/01/22 15:57	1
Selenium	ND		0.0050	0.00089	mg/L		11/30/22 12:00	12/01/22 15:57	1

Lab Sample ID: MB 240-553976/1-A

Matrix: Water

Analysis Batch: 554512

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 553976

	MB MB						•	
Analyte Re	ult Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND	0.020	0.016	mg/L		11/30/22 12:00	12/02/22 13:36	1
Lead	ND	0.0010	0.00045	mg/L		11/30/22 12:00	12/02/22 13:36	1
Thallium	ND	0.0010	0.00020	mg/L		11/30/22 12:00	12/02/22 13:36	1

Lab Sample ID: LCS 240-553976/2-A

Matrix: Water

Analysis Batch: 554304

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

Prep Batch: 553976

/ indigoto Datom ou lou i							i iop Batoin cooti
-	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	0.100	0.0978		mg/L		98	80 - 120
Arsenic	1.00	0.861		mg/L		86	80 - 120
Barium	1.00	0.859		mg/L		86	80 - 120
Beryllium	0.500	0.445		mg/L		89	80 - 120
Cadmium	0.500	0.460		mg/L		92	80 - 120
Calcium	25.0	23.5		mg/L		94	80 - 120
Chromium	0.500	0.465		mg/L		93	80 - 120
Cobalt	0.500	0.438		mg/L		88	80 - 120
Lithium	0.500	0.445		mg/L		89	80 - 120
Molybdenum	0.500	0.445		mg/L		89	80 - 120
Selenium	1.00	0.871		ma/L		87	80 - 120

Lab Sample ID: LCS 240-553976/2-A

Matrix: Water

Analysis Batch: 554512

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 553976

,								
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Boron	 0.100	0.0883		mg/L		88	80 - 120	
Lead	0.500	0.469		mg/L		94	80 - 120	
Thallium	1.00	0.924		mg/L		92	80 - 120	

Lab Sample ID: 180-148407-25 MS **Client Sample ID: CCR-AP-7 Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 554304

Prep Batch: 553976

7 maryolo Zatom co loc l	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	ND		0.100	0.0985		mg/L		98	75 - 125
Arsenic	0.0040	J	1.00	0.899		mg/L		90	75 - 125
Barium	0.10		1.00	0.995		mg/L		89	75 - 125
Beryllium	ND		0.500	0.443		mg/L		89	75 - 125
Cadmium	ND		0.500	0.457		mg/L		91	75 - 125
Calcium	110		25.0	126	4	mg/L		71	75 - 125
Chromium	ND		0.500	0.460		mg/L		92	75 ₋ 125

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Project/Site: CCR Groundwater Monitoring

Method: 6020A - Metals (ICP/MS) (Continued)

Matrix: Water

Analysis Batch: 554304

Lab Sample ID: 180-148407-25 MS **Client Sample ID: CCR-AP-7 Prep Type: Total Recoverable Prep Batch: 553976**

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Cobalt	0.00087	J	0.500	0.449		mg/L		90	75 - 125	
Molybdenum	0.0014	J	0.500	0.460		mg/L		92	75 - 125	
Selenium	ND		1.00	0.861		mg/L		86	75 - 125	

Lab Sample ID: 180-148407-25 MS

Matrix: Water

Analysis Batch: 554512

Prep Type: Total Recoverable Prep Batch: 553976

Client Sample ID: CCR-AP-7

Job ID: 180-148407-1

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Boron	0.049	F1	0.100	0.119	F1	mg/L		70	75 - 125	
Lead	0.00082	J	0.500	0.472		mg/L		94	75 - 125	
Thallium	0.00039	J	1.00	0.920		mg/L		92	75 - 125	

Lab Sample ID: 180-148407-25 MSD

Matrix: Water

Client Sample ID: CCR-AP-7 **Prep Type: Total Recoverable**

Analysis Batch: 554304 **Prep Batch: 553976** Sample Sample Spike MSD MSD %Rec **RPD** Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Antimony ND 0.100 0.0998 75 - 125 mg/L 100 20 Arsenic 0.0040 J 0.903 75 - 125 20 1.00 mg/L 90 0 20 Barium 0.10 1.00 1.02 mg/L 92 75 - 125 3 Beryllium ND 0.500 0.454 75 - 125 20 mg/L 0.462 Cadmium ND 0.500 mg/L 92 75 - 125 20 Calcium 110 25.0 127 4 mg/L 76 75 - 125 20 ND 0.500 0.475 20 Chromium mg/L 95 75 - 125 Cobalt 0.00087 J 0.500 0.450 mg/L 90 75 - 125 20 Molybdenum 0.0014 J 0.500 0.462 mg/L 92 75 - 125 20 75 - 125 Selenium ND 1.00 0.872 mg/L 87 20

Lab Sample ID: 180-148407-25 MSD

Matrix: Water

Client Sample ID: CCR-AP-7 **Prep Type: Total Recoverable**

Analysis Batch: 554512									Prep Ba	atch: 5	3976
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	0.049	F1	0.100	0.119	F1	mg/L		70	75 - 125	0	20
Lead	0.00082	J	0.500	0.485		mg/L		97	75 - 125	3	20
Thallium	0.00039	J	1.00	0.946		mg/L		95	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-553967/1-A

Matrix: Water

Analysis Batch: 554531

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

Prep Batch: 553967

	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		11/30/22 12:00	12/02/22 11:11	1

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: MB 240-553979/1-A

Job ID: 180-148407-1

Client Sample ID: Method Blank

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-553967/2-A				Clie	nt Saı	mple ID	: Lab Control Sample
Matrix: Water							Prep Type: Total/NA
Analysis Batch: 554531							Prep Batch: 553967
	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Mercury	5.00	5.22		ug/L		104	80 - 120

Lab Sample ID: 180-14840 Matrix: Water Analysis Batch: 554531		Sample	Spike	ме	MS			Clie	Prep Ty	e ID: WAP-4I pe: Total/NA itch: 553967
Analysis	•	•	•			1114	_	0/ 🗖		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Mercury	ND		0.00100	0.00107		ma/l		107	80 - 120	

Lab Sample ID: 180-148407	7-6 MSD							Clie	nt Sample	D: W	AP-4I
Matrix: Water									Prep Ty	pe: Tot	al/NA
Analysis Batch: 554531									Prep Ba	tch: 5	53967
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.00100	0.00102		mg/L		102	80 - 120	5	20

Analysis Batch: 554305								Prep Batch:	
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Morount	ND		0.20	0.12	ua/I		11/20/22 12:00	10/01/00 12:50	1

Lab Sample ID: LCS 240-553979/2-A				Cile	nt Sai	חו mpie	: Lab Control Sample	Э
Matrix: Water							Prep Type: Total/N/	4
Analysis Batch: 554305							Prep Batch: 553979	9
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Mercury	5.00	5.15		ug/L		103	80 - 120	_

Lab Sample ID: 180-148407-25 MS								Client Sample ID: CCR-AP-7					
Matrix: Water									Prep Ty	pe: Total/NA			
Analysis Batch: 554305									Prep Ba	atch: 553979			
-	Sample	Sample	Spike	MS	MS				%Rec				
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits				
Mercury	ND		0.00100	0.00104		mg/L		104	80 - 120				

Lab Sample ID: 180-148407-25 MSD Matrix: Water Analysis Batch: 554305									Sample ID Prep Ty Prep Ba	pe: Tot	al/NA
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.00100	0.000970		mg/L		97	80 - 120	7	20

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Client: Haley & Aldrich, Inc. Project/Site: CCR Groundwater Monitoring Job ID: 180-148407-1

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-419288/27

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

Matrix: Water

Analysis Batch: 419288

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
pH	7.00	7.0		SU		101	99 - 101	

Lab Sample ID: LCS 180-419288/4 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 419288

Spike LCS LCS %Rec Analyte Added Result Qualifier D %Rec Limits Unit 7.00 7.0 SU 99 - 101 рΗ 100

Lab Sample ID: LCS 180-419288/50 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 419288

Spike LCS LCS %Rec Analyte Added Result Qualifier Limits Unit D %Rec pН 7.00 7.0 SU 99 - 101

Lab Sample ID: 180-148407-6 DU Client Sample ID: WAP-4I Prep Type: Total/NA

Matrix: Water

Analysis Batch: 419288

DU DU **RPD** Sample Sample Analyte Result Qualifier Result Qualifier Unit RPD Limit 7.7 HF 7.7 HF SU

Lab Sample ID: 180-148407-16 DU Client Sample ID: WAP-8S Prep Type: Total/NA

Matrix: Water

Analysis Batch: 419288

	Sample	Sample	DU	DU				RPD)
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit	t
Hq	7.8	HF	 7.9		SU		0.9	2	<u>.</u>

Lab Sample ID: 180-148407-25 DU Client Sample ID: CCR-AP-7 Prep Type: Total/NA

Matrix: Water

Analysis Batch: 419288

	Sample	Sample	DU	DU					RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	R	PD	Limit
H	7.7	HF	7.8	HF	SU			1	2

Lab Sample ID: LCS 180-420258/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 420258

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
pH	7.00	7.1	-	SU		101	99 - 101	

Lab Sample ID: 180-148407-C-25 DU Client Sample ID: 180-148407-C-25 DU

Matrix: Water

Analysis Ratch: 420258

Analysis Batch. 420230	Sample	Sample	DU	DU					RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D		RPD	Limit
рН	7.2		7.2		SU			0.4	2

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Prep Type: Total/NA

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Lab Sample ID: LCS 180-421852/1

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

Matrix: Water

Analysis Batch: 421852 Spike LCS LCS

%Rec Added Result Qualifier %Rec Limits Analyte Unit SU 99 - 101 рΗ 7.00 7.0 100

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

Lab Sample ID: MB 180-419108/1 **Client Sample ID: Method Blank** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 419108

MB MB

Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 10 Total Dissolved Solids $\overline{\mathsf{ND}}$ 10 mg/L 11/23/22 18:04

Lab Sample ID: LCS 180-419108/2 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 419108

Spike LCS LCS %Rec Added Result Qualifier Limits Analyte Unit n %Rec 85 - 115 **Total Dissolved Solids** 388 380 mg/L

Lab Sample ID: 180-148407-6 DU Client Sample ID: WAP-4I **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 419108

Sample Sample DU DU **RPD** Result Qualifier Analyte Result Qualifier Unit RPD Limit **Total Dissolved Solids** 230 229 mg/L

Lab Sample ID: MB 180-419240/1 **Client Sample ID: Method Blank Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 419240

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Total Dissolved Solids ND 10 10 mg/L 11/28/22 15:28

Lab Sample ID: LCS 180-419240/2 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 419240

LCS LCS Spike %Rec Added Result Qualifier Analyte Unit %Rec Limits Total Dissolved Solids 388 396 102 85 - 115 mg/L

Lab Sample ID: 180-148407-25 DU Client Sample ID: CCR-AP-7 Prep Type: Total/NA

Matrix: Water

Analysis Batch: 419240

DU DU **RPD** Sample Sample Result Qualifier Result Qualifier Unit D RPD Limit Total Dissolved Solids 580 574 mg/L 0.3

Prep Type: Total/NA

Prep Batch: 591878

Prep Type: Total/NA

Prep Batch: 591878

Prep Type: Total/NA

12/01/22 09:07 12/27/22 14:13

Client Sample ID: Lab Control Sample

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

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

Lab Sample ID: MB 180-419247/1 Client Sample ID: Method Blank

Matrix: Water

Analysis Batch: 419247

MB MB

Analyzed Result Qualifier RL **MDL** Unit Dil Fac Analyte D Prepared 10 10 mg/L 11/28/22 17:36 **Total Dissolved Solids** ND

Lab Sample ID: LCS 180-419247/2 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 419247

Spike LCS LCS %Rec Added Result Qualifier Unit D %Rec Limits Analyte 388 **Total Dissolved Solids** 394 mg/L 102 85 - 115

Method: 9315 - Radium-226 (GFPC)

-0.03755 U

Lab Sample ID: MB 160-591878/1-A Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Water

Radium-226

Analysis Batch: 594849

Total Count MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac

1.00

0.123 pCi/L

0.0510 MB MB Carrier Qualifier Limits %Yield Prepared Analyzed

0.0509

Ba Carrier 92.2 40 - 110 12/01/22 09:07 12/27/22 14:13

Lab Sample ID: LCS 160-591878/2-A **Matrix: Water**

Analysis Batch: 594849

Total LCS LCS %Rec Spike Uncert. Added Analyte Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits Radium-226 11.3 1.08 10.34 1.00 0.102 pCi/L 91 75 - 125

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 94.7 40 - 110

Lab Sample ID: MB 160-592044/1-A **Client Sample ID: Method Blank**

Matrix: Water

Analysis Batch: 594846

Prep Batch: 592044 Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL**MDC** Unit Prepared Analyzed Dil Fac 0.0449 Radium-226 0.01068 U 0.0449 1.00 0.0905 pCi/L 12/02/22 09:26 12/27/22 14:17

MB MB Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 95.4 40 - 110 12/02/22 09:26 12/27/22 14:17

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Dil Fac

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-592044/2-A

Matrix: Water

Analysis Batch: 594846

Client Sample ID: Lab Control Sample

%Rec

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 592044

Prep Type: Total/NA

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Total Spike LCS LCS Uncert.

Analyte Added Result Qual $(2\sigma + / -)$ RL MDC Unit %Rec Limits Radium-226 1.06 1.00 0.0894 pCi/L 75 - 125

11.3 10.11

LCS LCS

Carrier %Yield Qualifier Limits Ba Carrier 99.0 40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-591884/1-A

Matrix: Water

Analysis Batch: 594204

Prep Batch: 591884 Count Total MB MB Uncert. Uncert.

Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-228 0.3757 0.317 0.318 1.00 0.493 pCi/L 12/01/22 09:29 12/19/22 12:12

MΒ MΒ Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 92.2 40 - 110 12/01/22 09:29 12/19/22 12:12 Y Carrier 82.2 40 - 110 12/01/22 09:29 12/19/22 12:12

Lab Sample ID: LCS 160-591884/2-A

Matrix: Water

Analysis Batch: 594204

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

Prep Batch: 591884

Prep Type: Total/NA

Prep Batch: 592054

12/02/22 09:55 12/19/22 12:17

Spike LCS LCS Uncert. %Rec Added Result Qual $(2\sigma + / -)$ RLLimits **Analyte** MDC Unit %Rec Radium-228 8.35 8.628 1.16 1.00 0.414 pCi/L 103 75 - 125

Total

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 94 7 40 - 110 Y Carrier 90.1 40 - 110

Lab Sample ID: MB 160-592054/1-A **Client Sample ID: Method Blank**

Matrix: Water

Analysis Batch: 594201

Radium-228

Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac

1.00

0.439 pCi/L

0.326

0.322

MΒ MB

0.5866

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 95.4 40 - 110 12/02/22 09:55 12/19/22 12:17 Y Carrier 80.0 40 - 110 12/02/22 09:55 12/19/22 12:17

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QC Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-148407-1

Total

Project/Site: CCR Groundwater Monitoring

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

Lab Sample ID: LCS 160-592054/2-A **Matrix: Water**

Analysis Batch: 594201

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

Prep Batch: 592054

				iotai					
	Spike	LCS	LCS	Uncert.				%Rec	
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC Unit	%Rec	Limits	
Radium-228	8.35	9.629		1.27	1.00	0.456 pCi/L	115	75 - 125	

LCS LCS

Carrier	%Yield	Qualifier	Limits
Ba Carrier	99.0		40 - 110
Y Carrier	84.9		40 - 110

QC Association Summary

Client: Haley & Aldrich, Inc.

Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

HPLC/IC

Analysis Batch: 419148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-1	WAP-1	Total/NA	Water	EPA 9056A	
180-148407-2	WAP-2RR	Total/NA	Water	EPA 9056A	
180-148407-3	WAP-3S	Total/NA	Water	EPA 9056A	
180-148407-4	WAP-3D	Total/NA	Water	EPA 9056A	
180-148407-5	WAP-4S	Total/NA	Water	EPA 9056A	
180-148407-6	WAP-4I	Total/NA	Water	EPA 9056A	
180-148407-7	WAP-4D	Total/NA	Water	EPA 9056A	
180-148407-8	WAP-5S	Total/NA	Water	EPA 9056A	
180-148407-9	WAP-5D	Total/NA	Water	EPA 9056A	
180-148407-10	WAP-5I	Total/NA	Water	EPA 9056A	
180-148407-11	WAP-6S	Total/NA	Water	EPA 9056A	
180-148407-12	WAP-6I	Total/NA	Water	EPA 9056A	
180-148407-13	WAP-6D	Total/NA	Water	EPA 9056A	
180-148407-14	WAP-7S	Total/NA	Water	EPA 9056A	
180-148407-15	WAP-7D	Total/NA	Water	EPA 9056A	
180-148407-16	WAP-8S	Total/NA	Water	EPA 9056A	
180-148407-17	WAP-8I	Total/NA	Water	EPA 9056A	
180-148407-18	WAP-8D	Total/NA	Water	EPA 9056A	
180-148407-19	WAP-9S	Total/NA	Water	EPA 9056A	
180-148407-20	WAP-9I	Total/NA	Water	EPA 9056A	
180-148407-21	WAP-9D	Total/NA	Water	EPA 9056A	
180-148407-22	FIELD BLANK	Total/NA	Water	EPA 9056A	
180-148407-23	BLIND DUP 1	Total/NA	Water	EPA 9056A	
180-148407-24	BLIND DUP 2	Total/NA	Water	EPA 9056A	
180-148407-25	CCR-AP-7	Total/NA	Water	EPA 9056A	
MB 180-419148/36	Method Blank	Total/NA	Water	EPA 9056A	
MB 180-419148/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-419148/37	Lab Control Sample	Total/NA	Water	EPA 9056A	
LCS 180-419148/7	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-148407-6 MS	WAP-4I	Total/NA	Water	EPA 9056A	
180-148407-6 MSD	WAP-4I	Total/NA	Water	EPA 9056A	
180-148407-20 MS	WAP-9I	Total/NA	Water	EPA 9056A	
180-148407-20 MSD	WAP-9I	Total/NA	Water	EPA 9056A	
180-148407-25 MS	CCR-AP-7	Total/NA	Water	EPA 9056A	
180-148407-25 MSD	CCR-AP-7	Total/NA	Water	EPA 9056A	

Analysis Batch: 419311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-20	WAP-9I	Total/NA	Water	EPA 9056A	
180-148407-21	WAP-9D	Total/NA	Water	EPA 9056A	
180-148407-22	FIELD BLANK	Total/NA	Water	EPA 9056A	
180-148407-23	BLIND DUP 1	Total/NA	Water	EPA 9056A	
180-148407-24	BLIND DUP 2	Total/NA	Water	EPA 9056A	
MB 180-419311/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-419311/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 553966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-1	WAP-1	Total Recoverable	Water	3005A	

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12/28/2022

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QC Association Summary

Client: Haley & Aldrich, Inc.

Job ID: 180-148407-1 Project/Site: CCR Groundwater Monitoring

Metals (Continued)

Prep Batch: 553966 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-2	WAP-2RR	Total Recoverable	Water	3005A	_
180-148407-3	WAP-3S	Total Recoverable	Water	3005A	
180-148407-4	WAP-3D	Total Recoverable	Water	3005A	
180-148407-5	WAP-4S	Total Recoverable	Water	3005A	
180-148407-6	WAP-4I	Total Recoverable	Water	3005A	
180-148407-7	WAP-4D	Total Recoverable	Water	3005A	
180-148407-8	WAP-5S	Total Recoverable	Water	3005A	
180-148407-9	WAP-5D	Total Recoverable	Water	3005A	
180-148407-10	WAP-5I	Total Recoverable	Water	3005A	
180-148407-11	WAP-6S	Total Recoverable	Water	3005A	
180-148407-12	WAP-6I	Total Recoverable	Water	3005A	
180-148407-13	WAP-6D	Total Recoverable	Water	3005A	
180-148407-14	WAP-7S	Total Recoverable	Water	3005A	
180-148407-15	WAP-7D	Total Recoverable	Water	3005A	
180-148407-16	WAP-8S	Total Recoverable	Water	3005A	
180-148407-17	WAP-8I	Total Recoverable	Water	3005A	
180-148407-18	WAP-8D	Total Recoverable	Water	3005A	
180-148407-19	WAP-9S	Total Recoverable	Water	3005A	
180-148407-20	WAP-9I	Total Recoverable	Water	3005A	
MB 240-553966/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-553966/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-148407-6 MS	WAP-4I	Total Recoverable	Water	3005A	
180-148407-6 MSD	WAP-4I	Total Recoverable	Water	3005A	

Prep Batch: 553967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-1	WAP-1	Total/NA	Water	7470A	
180-148407-2	WAP-2RR	Total/NA	Water	7470A	
180-148407-3	WAP-3S	Total/NA	Water	7470A	
180-148407-4	WAP-3D	Total/NA	Water	7470A	
180-148407-5	WAP-4S	Total/NA	Water	7470A	
180-148407-6	WAP-4I	Total/NA	Water	7470A	
180-148407-7	WAP-4D	Total/NA	Water	7470A	
180-148407-8	WAP-5S	Total/NA	Water	7470A	
180-148407-9	WAP-5D	Total/NA	Water	7470A	
180-148407-10	WAP-5I	Total/NA	Water	7470A	
180-148407-11	WAP-6S	Total/NA	Water	7470A	
180-148407-12	WAP-6I	Total/NA	Water	7470A	
180-148407-13	WAP-6D	Total/NA	Water	7470A	
180-148407-14	WAP-7S	Total/NA	Water	7470A	
180-148407-15	WAP-7D	Total/NA	Water	7470A	
180-148407-16	WAP-8S	Total/NA	Water	7470A	
180-148407-17	WAP-8I	Total/NA	Water	7470A	
180-148407-18	WAP-8D	Total/NA	Water	7470A	
180-148407-19	WAP-9S	Total/NA	Water	7470A	
180-148407-20	WAP-9I	Total/NA	Water	7470A	
MB 240-553967/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-553967/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-148407-6 MS	WAP-4I	Total/NA	Water	7470A	
180-148407-6 MSD	WAP-4I	Total/NA	Water	7470A	

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QC Association Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Metals

Prep Batch: 553976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-21	WAP-9D	Total Recoverable	Water	3005A	
180-148407-22	FIELD BLANK	Total Recoverable	Water	3005A	
180-148407-23	BLIND DUP 1	Total Recoverable	Water	3005A	
180-148407-24	BLIND DUP 2	Total Recoverable	Water	3005A	
180-148407-25	CCR-AP-7	Total Recoverable	Water	3005A	
MB 240-553976/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-553976/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-148407-25 MS	CCR-AP-7	Total Recoverable	Water	3005A	
180-148407-25 MSD	CCR-AP-7	Total Recoverable	Water	3005A	

Prep Batch: 553979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-21	WAP-9D	Total/NA	Water	7470A	
180-148407-22	FIELD BLANK	Total/NA	Water	7470A	
180-148407-23	BLIND DUP 1	Total/NA	Water	7470A	
180-148407-24	BLIND DUP 2	Total/NA	Water	7470A	
180-148407-25	CCR-AP-7	Total/NA	Water	7470A	
MB 240-553979/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-553979/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-148407-25 MS	CCR-AP-7	Total/NA	Water	7470A	
180-148407-25 MSD	CCR-AP-7	Total/NA	Water	7470A	

Analysis Batch: 554304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-1	WAP-1	Total Recoverable	Water	6020A	553966
180-148407-2	WAP-2RR	Total Recoverable	Water	6020A	553966
180-148407-3	WAP-3S	Total Recoverable	Water	6020A	553966
180-148407-4	WAP-3D	Total Recoverable	Water	6020A	553966
180-148407-5	WAP-4S	Total Recoverable	Water	6020A	553966
180-148407-6	WAP-4I	Total Recoverable	Water	6020A	553966
180-148407-7	WAP-4D	Total Recoverable	Water	6020A	553966
180-148407-8	WAP-5S	Total Recoverable	Water	6020A	553966
180-148407-9	WAP-5D	Total Recoverable	Water	6020A	553966
180-148407-10	WAP-5I	Total Recoverable	Water	6020A	553966
180-148407-11	WAP-6S	Total Recoverable	Water	6020A	553966
180-148407-12	WAP-6I	Total Recoverable	Water	6020A	553966
180-148407-13	WAP-6D	Total Recoverable	Water	6020A	553966
180-148407-14	WAP-7S	Total Recoverable	Water	6020A	553966
180-148407-15	WAP-7D	Total Recoverable	Water	6020A	553966
180-148407-16	WAP-8S	Total Recoverable	Water	6020A	553966
180-148407-17	WAP-8I	Total Recoverable	Water	6020A	553966
180-148407-18	WAP-8D	Total Recoverable	Water	6020A	553966
180-148407-19	WAP-9S	Total Recoverable	Water	6020A	553966
180-148407-20	WAP-9I	Total Recoverable	Water	6020A	553966
180-148407-21	WAP-9D	Total Recoverable	Water	6020A	553976
180-148407-22	FIELD BLANK	Total Recoverable	Water	6020A	553976
180-148407-23	BLIND DUP 1	Total Recoverable	Water	6020A	553976
180-148407-24	BLIND DUP 2	Total Recoverable	Water	6020A	553976
180-148407-25	CCR-AP-7	Total Recoverable	Water	6020A	553976
MB 240-553966/1-A	Method Blank	Total Recoverable	Water	6020A	553966
MB 240-553976/1-A	Method Blank	Total Recoverable	Water	6020A	553976

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Job ID: 180-148407-1

Client: Haley & Aldrich, Inc.

Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

Metals (Continued)

Analysis Batch: 554304 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-553966/2-A	Lab Control Sample	Total Recoverable	Water	6020A	553966
LCS 240-553976/2-A	Lab Control Sample	Total Recoverable	Water	6020A	553976
180-148407-6 MS	WAP-4I	Total Recoverable	Water	6020A	553966
180-148407-6 MSD	WAP-4I	Total Recoverable	Water	6020A	553966
180-148407-25 MS	CCR-AP-7	Total Recoverable	Water	6020A	553976
180-148407-25 MSD	CCR-AP-7	Total Recoverable	Water	6020A	553976

Analysis Batch: 554305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-21	WAP-9D	Total/NA	Water	7470A	553979
180-148407-22	FIELD BLANK	Total/NA	Water	7470A	553979
180-148407-23	BLIND DUP 1	Total/NA	Water	7470A	553979
180-148407-24	BLIND DUP 2	Total/NA	Water	7470A	553979
180-148407-25	CCR-AP-7	Total/NA	Water	7470A	553979
MB 240-553979/1-A	Method Blank	Total/NA	Water	7470A	553979
LCS 240-553979/2-A	Lab Control Sample	Total/NA	Water	7470A	553979
180-148407-25 MS	CCR-AP-7	Total/NA	Water	7470A	553979
180-148407-25 MSD	CCR-AP-7	Total/NA	Water	7470A	553979

Analysis Batch: 554512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-1	WAP-1	Total Recoverable	Water	6020A	553966
180-148407-2	WAP-2RR	Total Recoverable	Water	6020A	553966
180-148407-2	WAP-2RR	Total Recoverable	Water	6020A	553966
180-148407-3	WAP-3S	Total Recoverable	Water	6020A	553960
180-148407-3	WAP-3S	Total Recoverable	Water	6020A	553966
180-148407-4	WAP-3D	Total Recoverable	Water	6020A	553966
180-148407-4	WAP-3D	Total Recoverable	Water	6020A	553966
180-148407-5	WAP-4S	Total Recoverable	Water	6020A	553966
180-148407-5	WAP-4S	Total Recoverable	Water	6020A	553966
180-148407-6	WAP-4I	Total Recoverable	Water	6020A	553966
180-148407-7	WAP-4D	Total Recoverable	Water	6020A	553966
180-148407-8	WAP-5S	Total Recoverable	Water	6020A	553966
180-148407-8	WAP-5S	Total Recoverable	Water	6020A	553966
180-148407-9	WAP-5D	Total Recoverable	Water	6020A	553966
180-148407-10	WAP-5I	Total Recoverable	Water	6020A	553966
180-148407-11	WAP-6S	Total Recoverable	Water	6020A	553966
180-148407-11	WAP-6S	Total Recoverable	Water	6020A	553966
180-148407-12	WAP-6I	Total Recoverable	Water	6020A	553966
180-148407-13	WAP-6D	Total Recoverable	Water	6020A	553966
180-148407-14	WAP-7S	Total Recoverable	Water	6020A	553966
180-148407-14	WAP-7S	Total Recoverable	Water	6020A	553966
180-148407-15	WAP-7D	Total Recoverable	Water	6020A	553966
180-148407-15	WAP-7D	Total Recoverable	Water	6020A	553966
180-148407-16	WAP-8S	Total Recoverable	Water	6020A	553966
180-148407-16	WAP-8S	Total Recoverable	Water	6020A	553966
180-148407-17	WAP-8I	Total Recoverable	Water	6020A	553966
180-148407-18	WAP-8D	Total Recoverable	Water	6020A	553966
180-148407-19	WAP-9S	Total Recoverable	Water	6020A	553966
180-148407-19	WAP-9S	Total Recoverable	Water	6020A	553966
180-148407-20	WAP-9I	Total Recoverable	Water	6020A	553966

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Client: Haley & Aldrich, Inc. Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

Metals (Continued)

Analysis Batch: 554512 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-21	WAP-9D	Total Recoverable	Water	6020A	553976
180-148407-22	FIELD BLANK	Total Recoverable	Water	6020A	553976
180-148407-23	BLIND DUP 1	Total Recoverable	Water	6020A	553976
180-148407-23	BLIND DUP 1	Total Recoverable	Water	6020A	553976
180-148407-24	BLIND DUP 2	Total Recoverable	Water	6020A	553976
180-148407-25	CCR-AP-7	Total Recoverable	Water	6020A	553976
MB 240-553976/1-A	Method Blank	Total Recoverable	Water	6020A	553976
LCS 240-553976/2-A	Lab Control Sample	Total Recoverable	Water	6020A	553976
180-148407-6 MS	WAP-4I	Total Recoverable	Water	6020A	553966
180-148407-6 MSD	WAP-4I	Total Recoverable	Water	6020A	553966
180-148407-25 MS	CCR-AP-7	Total Recoverable	Water	6020A	553976
180-148407-25 MSD	CCR-AP-7	Total Recoverable	Water	6020A	553976

Analysis Batch: 554531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-1	WAP-1	Total/NA	Water	7470A	553967
180-148407-2	WAP-2RR	Total/NA	Water	7470A	553967
180-148407-3	WAP-3S	Total/NA	Water	7470A	553967
180-148407-4	WAP-3D	Total/NA	Water	7470A	553967
180-148407-5	WAP-4S	Total/NA	Water	7470A	553967
180-148407-6	WAP-4I	Total/NA	Water	7470A	553967
180-148407-7	WAP-4D	Total/NA	Water	7470A	553967
180-148407-8	WAP-5S	Total/NA	Water	7470A	553967
180-148407-9	WAP-5D	Total/NA	Water	7470A	553967
180-148407-10	WAP-5I	Total/NA	Water	7470A	553967
180-148407-11	WAP-6S	Total/NA	Water	7470A	553967
180-148407-12	WAP-6I	Total/NA	Water	7470A	553967
180-148407-13	WAP-6D	Total/NA	Water	7470A	553967
180-148407-14	WAP-7S	Total/NA	Water	7470A	553967
180-148407-15	WAP-7D	Total/NA	Water	7470A	553967
180-148407-16	WAP-8S	Total/NA	Water	7470A	553967
180-148407-17	WAP-8I	Total/NA	Water	7470A	553967
180-148407-18	WAP-8D	Total/NA	Water	7470A	553967
180-148407-19	WAP-9S	Total/NA	Water	7470A	553967
180-148407-20	WAP-9I	Total/NA	Water	7470A	553967
MB 240-553967/1-A	Method Blank	Total/NA	Water	7470A	553967
LCS 240-553967/2-A	Lab Control Sample	Total/NA	Water	7470A	553967
180-148407-6 MS	WAP-4I	Total/NA	Water	7470A	553967
180-148407-6 MSD	WAP-4I	Total/NA	Water	7470A	553967

General Chemistry

Analysis Batch: 419108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-5	WAP-4S	Total/NA	Water	SM 2540C	_
180-148407-6	WAP-4I	Total/NA	Water	SM 2540C	
180-148407-7	WAP-4D	Total/NA	Water	SM 2540C	
180-148407-8	WAP-5S	Total/NA	Water	SM 2540C	
180-148407-9	WAP-5D	Total/NA	Water	SM 2540C	
180-148407-10	WAP-5I	Total/NA	Water	SM 2540C	
180-148407-12	WAP-6I	Total/NA	Water	SM 2540C	

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Client: Haley & Aldrich, Inc. Job ID: 180-148407-1

Project/Site: CCR Groundwater Monitoring

General Chemistry (Continued)

Analysis Batch: 419108 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-13	WAP-6D	Total/NA	Water	SM 2540C	
180-148407-16	WAP-8S	Total/NA	Water	SM 2540C	
180-148407-17	WAP-8I	Total/NA	Water	SM 2540C	
180-148407-18	WAP-8D	Total/NA	Water	SM 2540C	
180-148407-19	WAP-9S	Total/NA	Water	SM 2540C	
MB 180-419108/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-419108/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-148407-6 DU	WAP-4I	Total/NA	Water	SM 2540C	

Analysis Batch: 419240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-1	WAP-1	Total/NA	Water	SM 2540C	
180-148407-3	WAP-3S	Total/NA	Water	SM 2540C	
180-148407-14	WAP-7S	Total/NA	Water	SM 2540C	
180-148407-15	WAP-7D	Total/NA	Water	SM 2540C	
180-148407-20	WAP-9I	Total/NA	Water	SM 2540C	
180-148407-24	BLIND DUP 2	Total/NA	Water	SM 2540C	
180-148407-25	CCR-AP-7	Total/NA	Water	SM 2540C	
MB 180-419240/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-419240/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-148407-25 DU	CCR-AP-7	Total/NA	Water	SM 2540C	

Analysis Batch: 419247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-2	WAP-2RR	Total/NA	Water	SM 2540C	_
180-148407-4	WAP-3D	Total/NA	Water	SM 2540C	
180-148407-21	WAP-9D	Total/NA	Water	SM 2540C	
180-148407-22	FIELD BLANK	Total/NA	Water	SM 2540C	
180-148407-23	BLIND DUP 1	Total/NA	Water	SM 2540C	
MB 180-419247/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-419247/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 419288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-1	WAP-1	Total/NA	Water	EPA 9040C	
180-148407-3	WAP-3S	Total/NA	Water	EPA 9040C	
180-148407-4	WAP-3D	Total/NA	Water	EPA 9040C	
180-148407-6	WAP-4I	Total/NA	Water	EPA 9040C	
180-148407-7	WAP-4D	Total/NA	Water	EPA 9040C	
180-148407-8	WAP-5S	Total/NA	Water	EPA 9040C	
180-148407-9	WAP-5D	Total/NA	Water	EPA 9040C	
180-148407-10	WAP-5I	Total/NA	Water	EPA 9040C	
180-148407-11	WAP-6S	Total/NA	Water	EPA 9040C	
180-148407-12	WAP-6I	Total/NA	Water	EPA 9040C	
180-148407-13	WAP-6D	Total/NA	Water	EPA 9040C	
180-148407-14	WAP-7S	Total/NA	Water	EPA 9040C	
180-148407-15	WAP-7D	Total/NA	Water	EPA 9040C	
180-148407-16	WAP-8S	Total/NA	Water	EPA 9040C	
180-148407-17	WAP-8I	Total/NA	Water	EPA 9040C	
180-148407-18	WAP-8D	Total/NA	Water	EPA 9040C	
180-148407-19	WAP-9S	Total/NA	Water	EPA 9040C	

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Client: Haley & Aldrich, Inc.

Job ID: 180-148407-1 Project/Site: CCR Groundwater Monitoring

General Chemistry (Continued)

Analysis Batch: 419288 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-20	WAP-9I	Total/NA	Water	EPA 9040C	
180-148407-21	WAP-9D	Total/NA	Water	EPA 9040C	
180-148407-22	FIELD BLANK	Total/NA	Water	EPA 9040C	
180-148407-23	BLIND DUP 1	Total/NA	Water	EPA 9040C	
180-148407-24	BLIND DUP 2	Total/NA	Water	EPA 9040C	
180-148407-25	CCR-AP-7	Total/NA	Water	EPA 9040C	
LCS 180-419288/27	Lab Control Sample	Total/NA	Water	EPA 9040C	
LCS 180-419288/4	Lab Control Sample	Total/NA	Water	EPA 9040C	
LCS 180-419288/50	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-148407-6 DU	WAP-4I	Total/NA	Water	EPA 9040C	
180-148407-16 DU	WAP-8S	Total/NA	Water	EPA 9040C	
180-148407-25 DU	CCR-AP-7	Total/NA	Water	EPA 9040C	

Analysis Batch: 420258

Lab Sample ID 180-148407-2	Client Sample ID WAP-2RR	Prep Type Total/NA	Matrix Water	Method EPA 9040C	Prep Batch
LCS 180-420258/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-148407-C-25 DU	180-148407-C-25 DU	Total/NA	Water	EPA 9040C	

Analysis Batch: 421852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-5	WAP-4S	Total/NA	Water	EPA 9040C	
LCS 180-421852/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 591878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-1	WAP-1	Total/NA	Water	PrecSep-21	
180-148407-2	WAP-2RR	Total/NA	Water	PrecSep-21	
180-148407-3	WAP-3S	Total/NA	Water	PrecSep-21	
180-148407-4	WAP-3D	Total/NA	Water	PrecSep-21	
180-148407-5	WAP-4S	Total/NA	Water	PrecSep-21	
180-148407-6	WAP-4I	Total/NA	Water	PrecSep-21	
180-148407-7	WAP-4D	Total/NA	Water	PrecSep-21	
180-148407-8	WAP-5S	Total/NA	Water	PrecSep-21	
180-148407-9	WAP-5D	Total/NA	Water	PrecSep-21	
180-148407-10	WAP-5I	Total/NA	Water	PrecSep-21	
180-148407-11	WAP-6S	Total/NA	Water	PrecSep-21	
180-148407-12	WAP-6I	Total/NA	Water	PrecSep-21	
180-148407-13	WAP-6D	Total/NA	Water	PrecSep-21	
180-148407-14	WAP-7S	Total/NA	Water	PrecSep-21	
180-148407-15	WAP-7D	Total/NA	Water	PrecSep-21	
180-148407-16	WAP-8S	Total/NA	Water	PrecSep-21	
180-148407-17	WAP-8I	Total/NA	Water	PrecSep-21	
180-148407-18	WAP-8D	Total/NA	Water	PrecSep-21	
MB 160-591878/1-A	Method Blank	Total/NA	Water	PrecSep-21	
_CS 160-591878/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

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

Prep Batch: 591884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-1	WAP-1	Total/NA	Water	PrecSep_0	
180-148407-2	WAP-2RR	Total/NA	Water	PrecSep_0	
180-148407-3	WAP-3S	Total/NA	Water	PrecSep_0	
180-148407-4	WAP-3D	Total/NA	Water	PrecSep_0	
180-148407-5	WAP-4S	Total/NA	Water	PrecSep_0	
180-148407-6	WAP-4I	Total/NA	Water	PrecSep_0	
180-148407-7	WAP-4D	Total/NA	Water	PrecSep_0	
180-148407-8	WAP-5S	Total/NA	Water	PrecSep_0	
180-148407-9	WAP-5D	Total/NA	Water	PrecSep_0	
180-148407-10	WAP-5I	Total/NA	Water	PrecSep_0	
180-148407-11	WAP-6S	Total/NA	Water	PrecSep_0	
180-148407-12	WAP-6I	Total/NA	Water	PrecSep_0	
180-148407-13	WAP-6D	Total/NA	Water	PrecSep_0	
180-148407-14	WAP-7S	Total/NA	Water	PrecSep_0	
180-148407-15	WAP-7D	Total/NA	Water	PrecSep_0	
180-148407-16	WAP-8S	Total/NA	Water	PrecSep_0	
180-148407-17	WAP-8I	Total/NA	Water	PrecSep_0	
180-148407-18	WAP-8D	Total/NA	Water	PrecSep_0	
MB 160-591884/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-591884/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 592044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-19	WAP-9S	Total/NA	Water	PrecSep-21	
180-148407-20	WAP-9I	Total/NA	Water	PrecSep-21	
180-148407-21	WAP-9D	Total/NA	Water	PrecSep-21	
180-148407-22	FIELD BLANK	Total/NA	Water	PrecSep-21	
180-148407-23	BLIND DUP 1	Total/NA	Water	PrecSep-21	
180-148407-24	BLIND DUP 2	Total/NA	Water	PrecSep-21	
180-148407-25	CCR-AP-7	Total/NA	Water	PrecSep-21	
MB 160-592044/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-592044/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 592054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-148407-19	WAP-9S	Total/NA	Water	PrecSep_0	
180-148407-20	WAP-9I	Total/NA	Water	PrecSep_0	
180-148407-21	WAP-9D	Total/NA	Water	PrecSep_0	
180-148407-22	FIELD BLANK	Total/NA	Water	PrecSep_0	
180-148407-23	BLIND DUP 1	Total/NA	Water	PrecSep_0	
180-148407-24	BLIND DUP 2	Total/NA	Water	PrecSep_0	
180-148407-25	CCR-AP-7	Total/NA	Water	PrecSep_0	
MB 160-592054/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-592054/2-A	Lab Control Sample	Total/NA	Water	PrecSep 0	

Eurofins Pittsburgh

12/28/2022

Job ID: 180-148407-1

12 13

S. H2SO4
T. TSP Dodecahydrate
T. TSP Dodecahydrate
V. MCAA
V. MCAA
Y. Trizma Special Instructions/Note: Ver 06 08 2021 2 - other (specify) N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 Sombank Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) 180-148407 Chain of Custody COC No 180-85680-14505.1 reservation Codes G - Amchlor H - Ascorbic Acid 1900 J - DI Water K - EDTA L - EDA Archive For ~~~~~ Job #: 43/2 HARRISBURG Date/Time Aethod of Shipment: Disposal By Lab State of Origin: **Analysis Requested** cooler Temperature(s) °C and Other Remarks: Special Instructions/QC Requirements E-Mail: Ken.Hayes@et.eurofinsus.com Return To Client × × Kecenyed by: 315_Ra226, 9320_Ra228 XXXX X X X × メ 040C, 9056A_ORGFM_28D Lab PM[.] Hayes, Ken Time: Company ATLAS Company Matrix Sompany 3 Radiological Type (C=comp, G=grab) Sample Hayley Torres 812-455-0988 00:10 Sompliance Project: △ Yes △ No 15:40 1:00 201 11-16-23 12:20 1-21-22 15:30 11-17-12 13:00 1-21-22 16:30 10:30 14:25 Sample 10:15 Time 2 PO# FB-242026. AB-241410 WO#. Unknown Date: AT Requested (days): Jue Date Requested: fr-16-1 26-16-11 ターシー 11-16-23 11-16-23 Sample Date 16.25 ネーニー Project #: 18016014 SSOW#: Jate/Time Poison B Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify) Custody Seal No.: Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468 CCR Groundwater Monitoring FB Culley J Non-Hazard ☐ Flammable 7988 Centerpoint Drive Suite 100 mark.breting@atcassociates.com Atlas Technical Consultants LLC ossible Hazard Identification celinquished by Hay for Empty Kit Relinquished by: Custody Seals Intact: NAP-JRR Client Information WAP-35 NAP-3D imple Identification JAP-45 WAP-4E WAP-4D WAP-SD WAP-SI WAP-55 WAP-65 864-214-8750(Tel) WAP-1 linquished byelinquished by-Mark Breting Indianapolis State, Zip: IN, 46256

Environment Testing

💸 eurofins

370472

Chain of Custody Record

Eurofins Pittsburgh

301 Alpha Drive RIDC Park

Eurofins Pittsburgh			n	370472	
301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468	Chain of Cus	Chain of Custody Record	HARRI	9	eurofins Environment Testing America
Client Information	Sampler Hayley Tolles	Lab PM: Hayes, Ken	Carri	Carrier Tracking No(s).	COC No ⁻ 180-85680-14505.2
Client Contact: Mark Breting	2	E-Mail Ken.Hayes@et.eurofinsus.com		State of Origin:	Page: Page 2 of ∄
Company Atlas Technical Consultants LLC			Analysis Requested		Job#
Address: 7988 Centerpoint Drive Suite 100	Due Date Requested:				
City Indianapolis	TAT Requested (days):				B - NaOH O - AsNaO2 C - Zn Acetate D N-2002
State, Zip: IN, 46256	Compliance Project: A Yes A No				
Phone: 864-214-8750(Tel)	Po #: FB-242026. AB-241410				
Email: mark.breting@atcassociates.com	WO#)(**16.) 			I - Ice J - DI Water
Project Name: CCR Groundwater Monitoring FB Culley	Project #: 18016014		927	i polisti	K - EDTA L - EDA
Site:	SSOW#:	мчэяс		100,50	Other:
	Sample Type	Matrix (Waveter, Variote A Color of A 2005 6 A	- Ra226, 93.	remuny	
Sample Identification	Sample Date Time G=grab)	0020∀ 0040C 0040C	- 8	Heles	Special Instructions/Note:
W/AP-6I	11:50	XXX XXX XXX XXX XXX XXX XXX XXX XXX XX	X		
3	14:15				
WAP	11-22-22 13:00				
3	11-22-22 14:00				
WAP-85	11-17-22 16-15				
LVAP-8I	11-18-22 11:05				
W4P-81)	11-18-22 12:40				
WAP-95	11-18-27 16:00				
WAP-9I	11-22-13:06				
WAP-9D	06:31 65-56-11				
Field Blank	11-21-22/11:45 1			3.8	
Possible Hazard Identification Non-Hazard — Flammable Skin Irrilant Doi:	Poison B Unknown		ial (A fee may be asses Client Dispo	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Retum To Client Disposal By Lab Hophy Propriet For Mon	itained longer than 1 month) Archive For
ested: I, II, III, IV, Other (specify)			Requirem		
Empty Kit Relinquished by:	Date:	Time:		Method of Shipment:	
Relinquished by: 4 TMY (W) 1125	00:91/ce-ex-	145	edex 1	Date/Time: Date/Time	19:00
			AH	Date/Time:	2 9:15
	Date/Time:	Company Received by:)	Date/Tinne:	Сотрапу
Custody Seals Intact: Custody Seal No.:		Cooler Temper	Cooler Temperature(s) °C and Other Remarks:		
					Ver 06/08/2021

Eurofins Pittsburgh				レーナつこう	
301 Alpha Drive RIDC Park Pittsburgh, PA 15238 December 413 062-3708	Chain of Custody Record	stody Reco		TARRISBURG.	
Client Information	Sampler Hawley Solles	Lab PM: Hayes, Ken		Carrier Tracking No(s):	COC No ⁻ 180-85680-14505.2
Client Contact: Mark Bretino	10	E-Mail: Ken.Haves(E-Mail: Ken. Haves@et.eurofinsus.com	State of Origin:	Page: Page 2 of 3
Figure 1997 Company Company Attas Technical Consultants LLC			Analysis Requested	quested	Job #:
Address: 7988 Centerpoint Drive Suite 100	Due Date Requested:				Code
City: Indianapolis	TAT Requested (days):				B - NaOH O - AsNaO2 C - Zn Acetate P - Na2O4S
State, Zip: IN, 46256	Compliance Project: A Yes A No				
Phone: 864-214-8750(Tel)	PO#: FB-242026. AB-241410				G - Amchlor T - TSP Dodecahydrate H - Ascorbic Acid 11 - Acetone
Emait: mark.breting@atcassociates.com	WO#.	2.012.0			l - Ice J - DI Water نر ـ בחדه
Project Name: CCR Groundwater Monitoring FB Culley	Project #. 18016014			200);	a separate vestion
Site:	SSOW#:	(316).2	saı		Other:
	Sample Type (C=Comp.	ļ	0000C, 90566_C 5020A, 7470A 5040C_Calcd - 7 316_Razze, 93:		Special Instructions/Note:
ő			3		
MS-1	11-16-22 15:40 6	3	××××		
1-QSD-1	2 Oh: SI 88-91-11	3	XXXX		
4-3N	9 01:01 -56-56-11	3	××××		
A-0-A	2 01:01 cx-ex-11	}	メメメ		
Blind Dup 1	11-21-22 / 6	3	X X X		
Blind Duns	7 / 25-28-11	3	χ χ χ		
A	9 01:01 86-86-11	3	メメメ		
Possible Hazard Identification	ison B		nple Disposal (A fee may be a	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client Disposal By Lab Archive For Mor	tained longer than 1 month) Archive For
ı			Requirem:		
Empty Kit Relinquished by:	Date:	Time:		Method of Shipment:	
Relinquished by: Haw ley Tollas	Date/Time: 19-22/19:00	Company	Received by:	Date/Time: ノンターン子	/19:00
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:/23/	9.15
Relinquished by:	Date/Time:	Сотрапу	Received by:	Date/Time:	Coffipany
Custody Seals intact: Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:	smarks:	
					Ver. 06/08/2021

3/04/2

Chain of Custody Record

Clear Information State Countre Lab State Countre Lab State Countre Note Countre	Eurofins Fittsburgn 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468	Chain of	Chain of Custody Record	ecor	-					i i	💸 eurofins	Environment Testing
Control of Section 1997 Control of Secti	Client Information (Sub Contract Lab)	Sampler:	Lab P Haye	M. es, Ken				Carrier Trac	king No(s):	180-	No: 474990.1	
100 100	Client Contact Shipping/Receiving	Phone:	E-Mai	Hayes@e	t.eurofin	sus.com		State of Orig Indiana	jin.	Page	e 1 of 3	
The Part of the	Company: TestAmerica Laboratories, Inc.			Accreditatio	ns Requir	od (See no	(9)			Job #	148407-1	
Figure December Control Cont	Address: 13715 Rider Trail North,	Due Date Requested: 1/2/2023				 	alysis R	aduested		Prese	lš -	98: M - Hevene
10. 630.55 10. 630.65 10.	City. Earth City	TAT Requested (days):			_		<u> </u>			- B -		N - None O - AsNaO2
Control Head Cont	State, Zip. MO, 63045	T		tai						0 0		P - Na204S Q - Na2SO3
Control Cont	66(Tel)	PO#								F O	,	R - Na2S2O3 S - H2SO4 T - TSP Dodecahydra
Signover	Email:	#OM		(ol								U - Acetone V - MCAA
Sample General (Ed.) Sample Control (Control (Con	Project Name. CCR Groundwater Monitoring	Project #: 18016014		N 10 8			_					W - pH 4-5 Y - Trizma Z - other (specify)
Sample Jeanification - Client ID (Lab ID) Sample Date Sample Date Sample Date Time Carganb Liverage Sample Carganb Liverage Sample Date Time Sample Date Time Sample Date Sample Date Sample Date Time Sample Date Sample Date Sample Date Time Sample Date Time Sample Date Time Sample Date Time T	Site:	SSOW#:		ey) as	g~dəga	Del.						
11/21/22 5/30 Presentable X X X X X X X X X	Samula idantifization Cline ID (1 sk ID)	Sample		M/SM mohe	320_Ra228/Pre	75_822s9322s				o hedmuM lato		
MAP-21 (180-148407-1) 11/21/22 E830n E830n Water X X X X X X X X X X X X X X X X 2 MAP-25 (180-148407-2) 11/21/22 E830n E830n Water X X X X X X X 2 2 MAP-41 (180-148407-4) 11/21/22 E830n E830n Water X X X X X X X 2 2 MAP-41 (180-148407-5) 11/11/622 E830n E830n Water X X X X X X X 2 2 MAP-41 (180-148407-5) 11/11/622 E830n E830n Water X X X X X X X X X X 2 2 MAP-41 (180-148407-5) 11/11/622 E830n E830n Water X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X		X	_ @	1×	6	н				1	Special in	structions/Note:
NAP-S (180-148407-2) 1172 (122 Easten (186-148407-2) Water (180-148407-2) X X X X X X X X X X X X X X X X X X X	NAP-1 (180-148407-1)	16:30 Fastern	Water	Â	+	×				2		
11/2 12/2 25/2	NAP-2RR (180-148407-2)		Water	^		×				2		
AMP-45 (180-148407-4) 11/12/122 163 bits Water X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X	WAP-3S (180-148407-3)		Water	^	\vdash	×				2		
11/16/22 Easten 11/1	NAP-3D (180-148407-4)		Water	*	-	×				2		
NAP-41 (180-148407-5)	NAP-4S (180-148407-5)		Water	_	×	×				2		
11/16/22 15/40	NAP-4I (180-148407-6)		Water	_	-	×				2		
NAP-SS (180-148407-7)	NAP-41 (180-148407-6DU)			×	-	×				4		
NAP-SS (180-148407-8) Note Since laboratory accreditations are subject to change. Eurofine Pittsburgh places the ownership of method, analyte & accreditation compliance upon out subcontract laboratory accreditations are subject to change. Eurofine Pittsburgh places the ownership of method, analyte & accreditation compliance upon out subcontract laboratory or other instructions with the provided. Any changes to accreditation status should be brought the laboratory or other instructions with the provided. Any changes to accreditation status should be brought to Eurofine Pittsburgh laboratory or other instructions with the provided. Any changes to accreditation status should be brought to Eurofine Pittsburgh laboratory or other instructions with the provided. Any changes to accreditation status should be brought to Eurofine Pittsburgh laboratory or other instructions with the provided. Any changes to accreditation status should be brought to Eurofine Pittsburgh laboratory or other instructions with the provided. Any changes to accreditation status should be brought to Eurofine Pittsburgh laboratory or other instructions with the provided. Any changes to accreditation status should be brought to Eurofine Pittsburgh laboratory or other instructions with the provided. Any changes to accreditation status should be brought to Eurofine Pittsburgh laboratory or other instructions with the provided and accreditation as accreditation status should be brought to Eurofine Pittsburgh laboratory or other instructions with the provided. Any changes to accreditation status should be brought to Eurofine Pittsburgh laboratory or other instructions with the provided and accreditation status should be brought to Eurofine Pittsburgh laboratory or other instructions with the provided status in the status of the prov	NAP-4D (180-148407-7)		Water		×	×				2		
Vote Since laboratory accreditations are subject to change. Eurofins Pitsburg places the ownership of method, analyte & accreditation compliance upon out subcontract taboratory accreditations are subject to change. Eurofins Pitsburgh laboratory accreditation in the State of Origin isted above for analysis/statismatix being analyzed, the samples must be shipped back to the Eurofins Pitsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pitsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pitsburgh laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pitsburgh laboratory or other instructions of Collect instructions of Collect instructions of Collect instructions of Company. Permany Deliverable Rank: 2 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	WAP-5S (180-148407-8)	6/22	Water	×	×	×				2		
Sample Disposal (A fee may be assessed if Samples are retained longer than 1n	vote. Since laboratory accreditations are subject to change, Eurofins Pittsburg naintain accreditation in the State of Origin listed above for analysis/tests/matr attention immediately. If all requested accreditations are current to date, return	n places the ownership of method, analyte fix being analyzed, the samples must be shift the signed Chain of Custody attesting to sa	accreditation compliance pped back to the Eurofins iid complicance to Eurofin	upon out su Pittsburgh la s Pittsburgh	ibcontract boratory o	laboratorie r other inst	s. This samp	le shipment is fo e provided. Any	orwarded under of changes to acc	hain-of-custody.	If the laborator should be broug	y does not currently ht to Eurofins Pittsbur
Primary Deliverable Rank: 2 Primary Deliverable Rank: 2 Date: Company Received by: Received	Possible Hazard Identification			Samp	le Dispo	sal (A f	ee may be	assessed if	samples are	retained lon	nger than 1	nonth)
Time: Time: Time: Time: Time: Method of Shipment. Date/Time Company Received by Conference Company Received by Conference Company Received by Conference Conference Company Conference Con	Deliverable Requested: I, II, III, IV, Other (specify)	Deliverable Rank:		Specia	Instruc	tions/QC	Requirem	Disposal by ents:	Lab	Archive FC	0/	Months
FED EX Date/Time: FED EX Date/Time: Company Received by Date/Time Date/Time Cooler Temperature(s) °C and Other Remarks	Empty Kit Relinquished by:	Γ		Time:				Methoc	d of Shipment:			
FED EX Date/Time: Company Received by, Coler Temperature(s) °C and Other Remarks	Relinquished by	25.22	Company		seived by:		1111	DEX	Date/Time			Company
Date/Time Company Received by Date/Time Dat	FED			Re	Seive S.	3		tarist	Date/Time	9		
Custody Seal No.:	kelinquished by:	Date/Time:	Company	Re	seived by:			0				
				Š	oler Tempe	arature(s) º	and Other	Remarks	ļ.			

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468		Chain of Custody Record	Cust	ody Re	cord					🔆 eurofins	S Environment Testing
Client Information (Sub Contract Lab)	Sampler			Lab PM: Hayes, Ken	, Ken			Carrier Tracking No(s)	king No(s):	COC No: 180-474990.2	
Client Contact Shipping/Receiving	Phone			E-Mail Ken.H	E-Mail: Ken.Hayes@et.eurofinsus.com	eurofin	sus.com	State of Origin Indiana	nig	Page: Page 2 of 3	
Company. TestAmerica Laboratories, Inc.		į		<	ccreditation	s Require	Accreditations Required (See note)			Job #: 180-148407-1	
Address 13715 Rider Trail North,	Due Date Requested: 1/2/2023	ij					Ana	Analysis Requested		Preservation Codes:	70
City Earth City	TAT Requested (days)	ys):					E			A - HCL B - NaOH	
State, Zip. MO, 63045					tei.	18				D - Arracetate D - Nitric Acid E - NaHSO4	
Phone. 314-298-8566(Tel) 314-298-8757(Fax)	# Od					rget Lis				F - MeOH G - Amchlor	R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate
Email	#OM			100	(0)	sT bisi					j > 3
Project Name. CCR Groundwater Monitoring	Project #: 18016014				f 10 25	bnat2 (K - EDTA L - EDA	W - pH 4-5 Y - Trizma Z - other (specify)
Site	SSOW#			Judes	SD (Ye					of conf	
Sample Identification - Client ID (Lab ID)	Sample Date	Sample (C	Sample Type (C=comp,	Matrix (wwwator, Sacollo, Owwastafoli, Darate	MSM mohe MOSM mohe	7320_Ra228/Pre				rədmuh listo	
	X	1	1 (2)		X						Special instructions/Note:
WAP-5D (180-148407-9)	11/16/22			Water	×	×	×			2	
WAP-5I (180-148407-10)	11/16/22	12:20 Eastern		Water	×	×	×			2	
WAP-6S (180-148407-11)	11/17/22	13:00 Eastern		Water	×	×	×			2	
WAP-6I (180-148407-12)	11/17/22	11:50 Eastern		Water	×	×	×			2	
WAP-6D (180-148407-13)	11/17/22	14:15 Eastern		Water	×	×	×			2	
WAP-7S (180-148407-14)	11/22/22	13:00 Eastern		Water	×	×	×			2	
WAP-7D (180-148407-15)	11/22/22	14:00 Eastern		Water	×	×	×			2	
WAP-8S (180-148407-16)	11/17/22	16:15 Eastern		Water	×	×				2	
WAP-8I (180-148407-17)	11/18/22	11:05 Eastern		Water	×	×	_			2	
Note Since laboratory accreditations are subject to change, Eurofins Pitisburgh places the ownership of method, analyte & accreditation compliance upon out 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/lests/matrix being analyzed, the samples must be shipped back to the Eurofins Pitisburgh aboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pitisburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Pitisburgh.	urgh places the ownership of natrix being analyzed, the sai uturn the signed Chain of Cus	f method, analyte mples must be sh tody attesting to s	& accreditation ipped back to said complicar	on compliance un the Eurofins Pi nce to Eurofins I	pon out sub ttsburgh lab Pittsburgh.	contract I	aboratories. other instru	This sample shipment is fi tions will be provided. An	orwarded under chain-of y changes to accreditation	-custody If the labore on status should be br	itory does not currently ought to Eurofins Pittsburgh
Possible Hazard Identification Unconfirmed					Sample	Dispo.	le Disposal (A fee Return To Client	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	f samples are retained	stained longer than	1 month)
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Delivera	Deliverable Rank: 2	1		Special	Instruct	ions/QC	Special Instructions/QC Requirements:			MORES
Empty Kit Relinquished by:		Date:		F	Time:			Metho	Method of Shipment:		
Relinquished by:	32	22 (8	3 3	T	Rece	Received by		rED EX	Date/Time:		Company
Reinquished by: FED EX Reinquished by:	Date/Time:			Company	1	Received by:	3	etti ingta	NOV 2 9	2022 (02.00	Company
Custody Seals Intact Custody Seal No.			-		Coole	ar Tempe	ature(s) °C	Cooler Temperature(s) °C and Other Remarks			

Phone: 412-963-7058 Fax: 412-963-2468	•											Supresi mannamana
Client Information (Sub Contract Lab)	Sampler			Lab PM Hayes, Ken	ue				Carrier Tracking No(s):	COC No. 180-474990	4990.3	
Client Contact Shipping/Receiving	Phone			E-Mail: Ken. Hayes@et. eurofinsus.com	s@et.e	urofins	us.com	State of Origin Indiana	rigin	Page: Page 3 of	of 3	
Company: TestAmerica Laboratories, Inc.				Accre	ditations	Require	Accreditations Required (See note)	(e):		Job #:	8407-1	
Address: 13715 Rider Trail North,	Due Date Requested: 1/2/2023						An	Analysis Requested	_	Preserv	Ιĕ	S:
City: Earth City	TAT Requested (days)									A - HCL B - NaO		N - None O - AsNaO2
Slate, Zip MO, 63045					1si.	ţs				D - Nitric	D - Nitric Acid	P - Na204S Q - Na2SO3
Phone. 314-298-8566(Tel) 314-298-8757(Fax)	#O0#			(arget L	ij jegi				F - MeO		R - Na2S2O3 S - H2SO4 T - TSP Dodecabydrate
Email:	# OM					sT bis						U - Acetone V - MCAA
Project Name. CCR Groundwater Monitoring	Project #: 18016014					Stand				Ainers L-EDA		W - pH 4-5 Y - Trizma Z - other (specify)
Site:	\$SOW#:									other:		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample (C=c	Sample (w= Type S====================================	Matrix (Wawater, Sweeled, Owwaterold, Onwaterold, First Analy)	MSM morne	320_Ra228/Pre-				o redmul listo		
				X	-	+					Decidi IIIs	Special instructions/Note
WAP-8D (180-148407-18)	11/18/22 F	12:40 astern	3	Water	×	×				2		
WAP-9S (180-148407-19)	11/18/22 E	16:00 Fastern	*	Water	×	×				2		
WAP-9I (180-148407-20)	11/22/22 E	13:06 Eastern	3	Water	×	×				2		
WAP-9D (180-148407-21)	11/22/22	16:30 Eastern	3	Water	×	×				7		
FIELD BLANK (180-148407-22)	11/21/22 E	11:45 Eastern	3	Water	×	×				2		
BLIND DUP 1 (180-148407-23)	11/21/22 E	00:01 Eastern	8	Water	×	×				2		
BLIND DUP 2 (180-148407-24)	11/22/22 E	00:01 Eastern	W	Water	×	×				2		
CCR-AP-7 (180-148407-25)	11/22/22 E	10:10 astern	M	Water	×	×				2		
CCR-AP-7 (180-148407-25DU)	11/22/22 E	10:10 D	DO W	Water	×	×				4		
Note Since laboratory accreditations are subject to change. Eurofins Pitisburgh places the ownership of method, analyte & accreditation compliance upon out subcontract laboratory. 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/lests/matrix being analyzed, the samples must be shipped back to the Eurofins Pitisburgh aboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pitisburgh attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Pitisburgh.	sburgh places the ownership of me s/matrix being analyzed, the sampl return the signed Chain of Custod	othod, analyte & a es must be shipp y attesting to said	accreditation co	mpliance upon Eurofins Pittsb 5 Eurofins Pitts	out subcargh labor	ontract Ig	boratorie. other insti	9. This sample shipment is ructions will be provided. A	forwarded under	chain-of-custody. If t	he laboratory uld be brough	does not currentl
Possible Hazard Identification Unconfirmed				S	ample	Dispos	le Disposal (A fe	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	if samples a	e retained longe	ar than 1 m	onth)
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank:	Rank: 2		S	pecial l	nstructi	ons/QC	Special Instructions/QC Requirements:	and to	O CARALON	i j	MOIIIIS
Empty Kit Relinquished by:	Date	je.		Time	l			Metr	Method of Shipment			
all	Data Server	(905)	Company	100	Received by	ved by		FED EX	Date/Time			Company
Relinquighed by FED EX	Date/Time: Date/Time:		Company	è è	Received by	Received by:	3	Vocinnata	Date/Time Date/Time	2 9 2022	Bal	Company
Custody Seals Intact: Custody Seal No			-								<u>. </u>	f modern

Chain of Custody Record

13,4/14,1

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Phone: 412-963-7058 Fax: 412-963-2468

Pittsburgh, PA 15238

Environment Testing

🔅 eurofins

COC No. 180-474993.1

arrier Tracking No(s)

State of Origin

P - Na204S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone

A - HCL
B - NaOH
C - Zn Acetate
C - Nitro Acid
E - Nitro Acid
F - MeOH
G - Amchlor
H - Ascorbic Acid

N - None O - AsNaO2

Preservation Codes

Job # 180-148407-1 Page Page 1 of 3

Y - Trizma Z - other (specify)

W - pH 4-5 V - MCAA

I - Ice J - DI Water K - EDTA L - EDA

Special Instructions/Note:

-- -

× × ×

Water Water Water

> Eastern 10:15 Eastern 11:00

11/17/22 11/16/22 11/16/22

WAP-4D (180-148407-7) WAP-5S (180-148407-8) WAP-5D (180-148407-9)

Eastern

M3C

Total Number of containers

	Sampler			Lab PM	Σ						S	Carrier Trac
Client Information (Sub Contract Lab)				Haye	Hayes, Ken	_					_	
Client Contact	Phone			E-Mail	2						Sta	State of On
Shipping/Receiving				Ken.	Hayes	@et e	ourofin	Ken. Hayes@et.eurofinsus.com	_		<u>-</u>	Indiana
Company Eurofins Environment Testing North Centr					Accred	itations	Requir	Accreditations Required (See note)	ote):			
Address. 180 S. Van Buren Avenue,	Due Date Requested: 1/3/2023	.pg						₹	nalys	is is	edne	Analysis Requested
City Barberton	TAT Requested (days):	3ys):										
State, Zip: OH, 44203												
Phone 330-497-9396(Tel) 330-497-0772(Fax)	* Od				(
Email	#OM											
Project Name: CCR Groundwater Monitoring	Project #. 18016014						rcury					
Site	SSOW#						ew de					
Sample Identification - Client ID (Lab ID)	Sample	Sample	Sample Type (C≃comp,	Sample Matrix Type (W-water, Sacobd, C-acomp, O-water) (G-acomp, G-acomp, G	benetliä blei MSM mohe	M) A2005\A0508	AOTATIAOTA					
	\bigvee	\bigvee	Preserva	Preservation Code:	- (-)	-	4					
WAP-1 (180-148407-1)	11/21/22	16.30 Eastern		Water		×	×				_	
WAP-2RR (180-148407-2)	11/21/22	15:30 Eastern		Water		×	×				-	
WAP-3S (180-148407-3)	11/21/22	11:45 Eastern		Water		×	×				-	
WAP-3D (180-148407-4)	11/21/22	10:30 Eastern		Water		×	×					
WAP-4S (180-148407-5)	11/16/22	14:25 Eastern		Water		×	×				_	
WAP-4I (180-148407-6)	11/16/22	15:40 Eastern		Water		×	×					
77 70804 0017 04 00404	0000	10:30		18/-4		,	;				-	

Note: Since abovatory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon out 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/fests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh aboratory 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 complicance to Eurofins Pittsburgh. Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Mon Possible Hazard Identification Unconfirmed

				Median 10 Citem	Lab Alchive Lor	MONI
	Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		Special Instructions/QC Requirements:		
	Empty Kit Relinquished by	Date		Time: Method	Method of Shipment:	
	Relinquished by 5C	Date/Time 15.00	.00 Company	Receiped of Malliner	Defeting 222 9:20	Compan
12	Relinquished by:	Date/Time.	Company	Received by	Date/Time	
/28/	Relinquished by	Date/Time	Company	Received by:	Date/Time	Company
/2022	Custody Seals Intact: Custody Seal No.: A Yes A No			Cooler Temperature(s) ⁹ C and Other Remarks.		

Cooler Temperature(s) ^aC and Other Remarks

Received by:

Date/Time

D	Record
	Custody
4	5
C 10	Chain

Eurofins Pittsburgh

Environment Testing

301 Alpha Drive RIDC Park			_	-			• }	e urofine	
Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468	Cla	Criain of Custody Record	y Neco	5			•		Environment Testi
Client Information (Sub Contract Lab)	Sampler		Lab PM Hayes, Ken		Ö	Carrier Tracking No(s)	2	COC No: 180-474993.2	
	Phone		E-Mail: Ken.Hayes@	E-Mait. Ken. Hayes@et. eurofinsus.com		State of Origin: Indiana		Page: Page 2 of 3	
Company Eurofins Environment Testing North Centr			Accredita	Accreditations Required (See note)	(See note)			Job # 180-148407-1	
Address 180 S. Van Buren Avenue,	Due Date Requested: 1/3/2023				Analysis Requested	ested		Preservation Codes:	8: M - Hexane
City: Barberton	TAT Requested (days):							A - HUL B - NaOH C - Zn Acetate	N - None O - AsNaO2
State, Zip. OH. 44203								Void 74	Q - Na2SO3
Phone 330-497-9396(Tel) 330-497-0772(Fax)	# Od		(F - MeOH G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrate
	WO#			teilduð				I - Ice J - DI Water	U - Acetone V - MCAA W - pH 4-5
Project Name CCR Groundwater Monitoring	Project # 18016014						neni s	K - EDTA L - EDA	Y - Trizma Z - other (specify)
Site	**NOSS						_	Other:	
			Matrix Secold. ield Filtered	M) A2005\A0S0			radmu M Isto	M31	
Sample Identification - Client ID (Lab ID)	Sample Date	Preservation Code:	3 ×				1	Special Ins	Special Instructions/Note:
WAP-5I (180-148407-10)	11/16/22 12:20 Fastern	-	Water	×			-		
WAP-6S (180-148407-11)	11/17/22 13:00 13:00 Fastern		Water	×			-		
WAP-6I (180-148407-12)	11/17/22 11:50 Fastern		Water	×			+		
WAP-6D (180-148407-13)	11/17/22 14:15 Eastern		Water	×			-		
WAP-7S (180-148407-14)	11/22/22 13:00 Eastern	Water	Iter	×			-		
WAP-7D (180-148407-15)	11/22/22 14:00 Eastern		Water	×			1		
WAP-8S (180-148407-16)	11/17/22 16:15 Eastern		Water	×			-		
WAP-8I (180-148407-17)	11/18/22 11:05 Eastern		Water	×			-		
WAP-8D (180-148407-18)	11/18/22 12:40 Eastern	Water	Iter	×			-		
Note Since laboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample 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 complicance to Eurofins Pittsburgh.	burgh places the ownership of method, an matrix being analyzed, the samples must eturn the signed Chain of Custody attestin	alyte & accreditation cor be shipped back to the E ig to said complicance to	npliance upon ou Eurofins Pittsburgl Eurofins Pittsbur	t subcontract la h laboratory or e gh	poratories. This sample shi ther instructions will be pro	pment is forward	led under chain-of-cus iges to accreditation si	tody. If the laborator	does not currently ht to Eurofins Pittsburg
Possible Hazard Identification Unconfirmed			San	ple Disposal (A f	ee may be	assessed if sam	nples are retaine	tained longer than 1	nonth)
Deliverable Requested: I, III, IV, Other (specify)	Primary Deliverable Rank: 2	2	Spe	cial instructi	Requirem				
Empty Kit Relinquished by:	Date		Time	0	,	Method of Shipment	hipment		
Relinquished by:	Date/Time 28 - 22	5.00 Company	cet		100	N	Date Tumper	9.70	Company
Relinquished by:	Date/Time	Company	Λ.	Received by:			Date/Time.		Company

linquished by.

Custody Seal No.

Custody Seals Intact:

Δ Yes Δ No

Ver: 06/08/202

: eurofins

Chain of Custody Record

Phone: 412-963-7058 Fax: 412-963-2468

Pittsburgh, PA 15238

Eurofins Pittsburgh 301 Alpha Drive RIDC Park

S - H2SO4 T - TSP Dodecahydrate Note: Since aboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon out 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/fests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh aboratory 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 complicance to Eurofins Pittsburgh. Special Instructions/Note: Z - other (specify) N · None O - AsNaO2 P - Na2O4S Q · Na2SO3 R · Na2S2O3 V - MCAA W - pH 4-5 Y - Trizma U - Acetone Company Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Mon M34 Preservation Codes A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
F - MacO4
F - MeOH
G - Amchlor
H - Ascorbic Acid COC No. 180-474993.3 180-148407-1 3 Page 3 of 3 I - Ice J - DI Water - EDTA D Total Number of containers イングーン Date/Time Method of Shipment State of Origin: Indiana **Analysis Requested** Cooler Temperature(s) ^oC and Other Remarks Special Instructions/QC Requirements Lab PM Hayes, Ken E-Mail Ken Hayes@et eurofinsus com Accreditations Required (See note Received by. 7470A/7470A_Prep Mercury × × × \times × × × × × × × × × × 020A/3005A (MOD) Custom Sublist Perform MS/MSD (Yes or No) Ime Field Filtered Sample (Yes or No) Preservation Code Matrix (Wewater, Sepokid, Oewasta/oil Water Water Water Water Water Water Water Company Company (C=comp, Sample G=grab) Type 18:00 Primary Deliverable Rank: 2 Eastern 13.06 Eastern 16:30 Eastern 00:01 Eastern 11:45 Eastern 00:01 Eastern 10:10 Sample Eastern Time 16.00 Date (AT Requested (days) 12-82-11 Due Date Requested: 1/3/2023 Sample Date 11/18/22 11/22/22 11/22/22 11/21/22 11/21/22 11/22/22 11/22/22 Project # 18016014 Date/Time Date/Time *MOSS Phone # ON Client Information (Sub Contract Lab) Deliverable Requested 1, II, III, IV, Other (specify) Custody Seal No Sample Identification - Client ID (Lab ID) Eurofins Environment Testing North Centr 330-497-9396(Tel) 330-497-0772(Fax) Possible Hazard Identification FIELD BLANK (180-148407-22) BLIND DUP 2 (180-148407-24) BLIND DUP 1 (180-148407-23) CCR Groundwater Monitoring CCR-AP-7 (180-148407-25) Address. 180 S. Van Buren Avenue, WAP-9D (180-148407-21) Empty Kit Relinquished by WAP-9S (180-148407-19) NAP-9I (180-148407-20) Custody Seals Intact A Yes A No Shipping/Receiving ndnished by linquished by: Inconfirmed linquished by State, Zip. OH, 44203 Barberton

	Login # :	
Barberton Facility		
Client by Noting Site Name	Cooler unpacked by:	
Cooler Received on 1992 Opened on 1992	_ Unarrek	
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Co.		
	Location	
Eurofins Cooler # Foam Box Client Cooler Box Othe		
	Other	
COOLANT: Wante Blue Ice Dry Ice Water Done		
1. Cooler temperature upon receipt IR GUN# IR-13 (CF +0.7 °C) Observed Cooler Temp. See Multip	ple Cooler Form	
IR GUN#IR-15 (CF 0.0°C) Observed Cooler Temp. °C Corrected	d Cooler Temps C.	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity	<u> </u>	—]
-Were the seals on the outside of the cooler(s) signed & dated?	Tests that are not	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes checked for pH by	<i>'</i> [
-Were tamper/custody seals intact and uncompromised?	Receiving:	į
3. Shippers' packing slip attached to the cooler(s)?	Yes No VOAs	į
4. Did custody papers accompany the sample(s)?	Yes No Oil and Grease	
5. Were the custody papers relinquished & signed in the appropriate place?	No TOC	
6. Was/were the person(s) who collected the samples clearly identified on the COC	C? (6) No	
7. Did all bottles arrive in good condition (Unbroken)?	🕅 s No	
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	No No	
9. For each sample, does the COC specify preservatives (Y/N), # of containers (A)		
10. Were correct bottle(s) used for the test(s) indicated?	No No	
11. Sufficient quantity received to perform indicated analyses?	Ces No	
12. Are these work share samples and all listed on the COC?	(e) No	
If yes, Questions 13-17 have been checked at the originating laboratory.	11 See 11 See 11 CON 11	27
13. Were all preserved sample(s) at the correct pH upon receipt? 14. Were VOAs on the COC?	Yes No NA pH Strip Lot# HC28679) (
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 #	Xes No	
17. Was a LL Hg or Me Hg trip blank present?	Yes No	
Contacted PM Date by via	Verbal Voice Mail Other	
Concerning		
18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES	xt page Samples processed by:	
		_
		_
		_
		_
9. SAMPLE CONDITION		_
Sample(s) were received after the recommendation	nded holding time had expired.	
Sample(s) were	e received in a broken container.	
Sample(s)were received with bubble	>6 mm in diameter. (Notify PM)	
0. SAMPLE PRESERVATION		
'ammla/a\	Sushan ad in the laboratory	
Sample(s)Preservative(s) added/Lot number(s):	_were further preserved in the laboratory.	
יייים ווייים וויים ווייים וויים ווייים וויים ווייים וויים ווייים ווייים ווייים ווייים ווייים וויים		-
OA Sample Preservation - Date/Time VOAs Frozen:		_

WI-NC-099

3F.71

Date/Time

Method of Shipment

Ver: 06/08/2021

Cooler Temperature(s) °C and Other Remarks

Received by

Company

Date/Time

Company Receive Company Received

(800

["22.22

And Balkinbule

Time

P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate Note Since aboratory accreditations are subject to change, Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon out 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/rests/matrix being analyzed, the samples must be shipped back to the Eurofins Pittsburgh is aboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Pittsburgh alterniton immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Pittsburgh. Special Instructions/Note: other (specify) N - None O - AsNaO2 V - MCAA W - pH 4-5 Acetone Months Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Mon Preservation Codes H - Ascorbic Acid COC No. 180-475069.1 180-148407-1 A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4 Page: Page 1 of 1 G - Amchlor Di Water F - MeOH EDTA EDA Total Number of containers Carrier Tracking No(s) State of Origin **Analysis Requested** Indiana Special Instructions/QC Requirements Accreditations Required (See note) Ken Hayes@et eurofinsus.com × 7470A/7470A_Prep Mercury × \times × × × × × 0200A/3005A (MOD) Custom Sublist Lab PM Hayes, Ken Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No) E-Mail BT=Tissue, A=Air Preservation Code Matrix Water Water (Wewater, Secolid, Oewsstafoli Water Water (C=comp, G=grab) MSD Type MSD MS MS Eastern 10:10 Eastern 10:10 Sample Eastern 15:40 Primary Deliverable Rank Eastern Time 15:40 (AT Requested (days): Due Date Requested: 1/3/2023 Sample Date 11/16/22 11/16/22 11/22/22 11/22/22 18016014 Phone # ON Client Information (Sub Contract Lab) Deliverable Requested: I, III, IV, Other (specify) Sample Identification - Client ID (Lab ID) **Eurofins Environment Testing North Centr** 330-497-9396(Tel) 330-497-0772(Fax) CCR-AP-7 (180-148407-25MSD) Possible Hazard Identification CCR-AP-7 (180-148407-25MS) CCR Groundwater Monitoring NAP-41 (180-148407-6MSD) NAP-41 (180-148407-6MS) mpty Kit Relinquished by 180 S. Van Buren Avenue Shipping/Receiving Unconfirmed State, Zip: OH, 44203 Barberton

Environment Testing

: eurofins

Chain of Custody Record (3.7)()よん

Phone: 412-963-7058 Fax: 412-963-2468

Eurofins Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

nquished by yd paysinby

Custody Seal No

Custody Seals Intact

A Yes A No

Eurofins - Canton Sample Receipt Form/Narrative Login #:
Barberton Facility
Client EUTO-FINS PHSOURAN Site Name Cooler unpacked by:
Cooler Received on 11-30'22 Opened on 11-30-22 RAPheile HAIde
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other
Receipt After-hours. Drop-off Date/Time Storage Location
Eurofins Cooler # T 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
IR GUN# IR-13 (CF +0.7 °C) Observed Cooler Temp 3.9 °C Corrected Cooler Temp 4.6 °C
IR GUN #IR-15 (CF 0.0°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 Tests that are not
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA checked for pH by
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes Receiving:
-Were tamper/custody seals intact and uncompromised? Yes No VA YOAs
5. Simplet's packing sinp attached to the cooler(s):
4. Did custody papers accompany the sample(s)?
 5. Were the custody papers relinquished & signed in the appropriate place? 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)? 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No
9. For each sample, does the COC specify preservatives (YN) # of containers (YN), and sample type of grab/comp(YN)?)
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# HC286797
14. Were VOAs on the COC?
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?
Contacted PM 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):
Time preserved:Preservative(s) added/Lot number(s):
VOA Sample Preservation - Date/Time VOAs Frozen:

W7-NC-099

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-148407-1

Login Number: 148407 List Source: Eurofins Pittsburgh

List Number: 1

Creator: Abernathy, Eric L

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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)	False	ARRIVED DAY HT EXPIRE 16TH & 17TH
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	

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/29/2023 7:24:27 PM

JOB DESCRIPTION

CCR Groundwater Monitoring FB Culley SDG NUMBER Culley West

JOB NUMBER

180-156881-1

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh PA 15238



Eurofins Pittsburgh

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 6/29/2023 7:24:27 PM

Authorized for release by Ken Hayes, Project Manager II Ken.Hayes@et.eurofinsus.com (615)301-5035

Kuntll Hay

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Table of Contents

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Method Summary	10
Lab Chronicle	11
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QC Association Summary	39
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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley SDG: Culley West

Job ID: 180-156881-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative 180-156881-1

Receipt

The samples were received on 5/19/2023 9:35 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 2.1°C and 2.5°C

Receipt Exceptions

The following samples were listed on the Chain of Custody (COC); however, no samples were received: WAP-5S (180-156881-1), WAP-5I (180-156881-2), WAP-8S (180-156881-4), WAP-8I (180-156881-5), WAP-4D (180-156881-7[DU]), WAP-4D (180-156881-7[MSD]) and WAP-4I (180-156881-8). They were received on 5/19/23 and were located at the end of the night and added to the login.

Gas Flow Proportional Counter

Method 9315 Ra226: Radium-226 batch 613645Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.WAP-5D (180-156881-3), DUP 1 (180-156881-9), (LCS 160-613645/2-A), (MB 160-613645/1-A), (180-156823-A-2-A) and (180-156823-G-2-F DU)

Method 9315 Ra226: Radium-226 batch 614557Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.WAP-5S (180-156881-1), WAP-5I (180-156881-2), WAP-8S (180-156881-4), WAP-8I (180-156881-5), WAP-8D (180-156881-6), WAP-4D (180-156881-7), WAP-4I (180-156881-8), (LCS 160-614557/2-A) and (MB 160-614557/1-A)

Method 9320 Ra228: Radium-228 batch 613647Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.WAP-5D (180-156881-3), DUP 1 (180-156881-9), (LCS 160-613647/2-A), (MB 160-613647/1-A), (180-156823-A-2-B) and (180-156823-G-2-G DU)

Method 9320 Ra228: Radium-228 batch 614558Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.WAP-5S (180-156881-1), WAP-5I (180-156881-2), WAP-8S (180-156881-4), WAP-8I (180-156881-5), WAP-8D (180-156881-6), WAP-4D (180-156881-7), WAP-4I (180-156881-8), (LCS 160-614558/2-A) and (MB 160-614558/1-A)

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.

Narrative

Job Narrative 180-156881-2

Receipt

The samples were received on 5/19/2023 9:35 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 2.1°C and 2.5°C

Receipt Exceptions

The following samples were listed on the Chain of Custody (COC); however, no samples were received: WAP-5S (180-156881-1), WAP-5I (180-156881-2), WAP-8S (180-156881-4), WAP-8I (180-156881-5), WAP-4D (180-156881-7[DU]), WAP-4D (180-156881-7[MSD]) and WAP-4I (180-156881-8). They were received on 5/19/23 and were located at the end of the night and added to the login.

> **Eurofins Pittsburgh** 6/29/2023

Job ID: 180-156881-1

Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley SDG: Culley West

Job ID: 180-156881-1 (Continued)

Laboratory: Eurofins Pittsburgh (Continued)

HPLC/IC

Method 9056A_ORGFM_28D: The continuing calibration blank (CCB) for analytical batch 180-436051 contained chloride above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

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

Metals

Method 6010D: The post digestion spike % recovery for boron associated with batch 180-438036 was outside of control limits. The associated sample is: (180-156881-E-7-D PDS).

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

General Chemistry

Method 2540C_Calcd: Sample did not reach a stable weight following 4 cycles of heating, cooling, and desiccating. Sample result from cycle 3 will be used to calculate analyte for method. WAP-5S (180-156881-1)

Method 2540C_Calcd: Sample did not reach a stable weight after 4 cycles of heating, cooling, and desiccating. Cycle 3 weight was used to calculate the Total Dissolved Solids in the sample.WAP-8I (180-156881-5)

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

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Job ID: 180-156881-1

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-156881-1

Project/Site: CCR Groundwater Monitoring FB Culley SDG: Culley West

Qualifiers

HPLC/IC

Qualifier **Qualifier Description**

Calibration Blank (ICB and/or CCB) is outside acceptance limits.

Metals

Qualifier **Qualifier Description**

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 Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Rad

Qualifier **Qualifier Description**

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" Minimum Detectable Activity (Radiochemistry) MDA MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit ML Minimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

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**

Presumptive **PRES** QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

Eurofins Pittsburgh

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6/29/2023

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Job ID: 180-156881-1 SDG: 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	06-25-23
California	State	2891	04-30-24
Connecticut	State	PH-0688	06-25-23
Florida	NELAP	E871008	06-25-23
Georgia	State	PA 02-00416	06-25-23
Illinois	NELAP	004375	06-30-24
Kansas	NELAP	E-10350	06-25-23
Kentucky (UST)	State	162013	04-30-23 *
Kentucky (WW)	State	KY98043	06-25-23
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-25-23
Maine	State	PA00164	03-06-24
Minnesota	NELAP	042-999-482	06-25-23
New Hampshire	NELAP	2030	06-25-23
New Jersey	NELAP	PA005	06-25-23
New York	NELAP	11182	06-25-23
North Carolina (WW/SW)	State	434	12-31-23
North Dakota	State	R-227	04-30-24
Oregon	NELAP	PA-2151	02-06-24
Pennsylvania	NELAP	02-00416	06-25-23
Rhode Island	State	LAO00362	12-31-22 *
South Carolina	State	89014	04-30-23 *
Texas	NELAP	T104704528	06-25-23
US Fish & Wildlife	US Federal Programs	058448	03-31-24
USDA	US Federal Programs	P330-16-00211	06-21-24
Utah	NELAP	PA001462019-8	05-31-24
Virginia	NELAP	10043	06-25-23
West Virginia DEP	State	142	06-25-23
Wisconsin	State	998027800	08-31-23

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	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23

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

Eurofins Pittsburgh

6/29/2023

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Job ID: 180-156881-1 SDG: 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
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-24
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-23

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Sample Summary

05/17/23 00:00 05/19/23 09:35

Client: Haley & Aldrich, Inc.

DUP 1

180-156881-9

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-156881-1	WAP-5S	Water	05/16/23 18:15	05/19/23 09:35
180-156881-2	WAP-5I	Water	05/16/23 17:10	05/19/23 09:35
180-156881-3	WAP-5D	Water	05/16/23 16:10	05/19/23 09:35
180-156881-4	WAP-8S	Water	05/17/23 15:40	05/19/23 09:35
180-156881-5	WAP-8I	Water	05/17/23 13:15	05/19/23 09:35
180-156881-6	WAP-8D	Water	05/17/23 14:20	05/19/23 09:35
180-156881-7	WAP-4D	Water	05/17/23 17:40	05/19/23 09:35
180-156881-8	WAP-4I	Water	05/17/23 19:15	05/19/23 09:35

Water

Job ID: 180-156881-1

SDG: Culley West

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Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Protocol	Laboratory
SW846	EET SL
SW846	EET SL

Job ID: 180-156881-1 SDG: 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: Haley & Aldrich, Inc.

Client Sample ID: WAP-5S

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-156881-1

Matrix: Water

SDG: Culley West

Job ID: 180-156881-1

Date Collected: 05/16/23 18:15 Date Received: 05/19/23 09:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: CHICS2100B		1	1 mL	1 mL	435928	05/23/23 12:27	SNL	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	436357	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6010D t ID: Q		1			438036	06/14/23 15:26	AAS	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	436345	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			438772	06/22/23 22:42	KED	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	436345	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			438909	06/23/23 19:04	KED	EET PIT
Total/NA	Prep	7470A			25 mL	25 mL	436996	06/05/23 12:00	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			437135	06/06/23 12:44	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436285	05/25/23 15:30	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	435869	05/22/23 16:09	LWM	EET PIT
Total/NA	Prep	PrecSep-21			957.35 mL	1.0 g	614557	06/06/23 10:30	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1		-	618150	06/28/23 18:21	FLC	EET SL
Total/NA	Prep	PrecSep_0			957.35 mL	1.0 g	614558	06/06/23 10:34	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1			617527	06/23/23 11:48	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			618364	06/29/23 16:50	SCB	EET SL

Lab Sample ID: 180-156881-2 **Client Sample ID: WAP-5I**

Date Collected: 05/16/23 17:10 **Matrix: Water** Date Received: 05/19/23 09:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	435928	05/23/23 12:42	SNL	EET PIT
	Instrumen	t ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	436357	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis	EPA 6010D		1			438036	06/14/23 15:31	AAS	EET PIT
	Instrumen	it ID: Q								
Total Recoverable	Prep	3005A			50 mL	50 mL	436345	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020A		1			438772	06/22/23 22:45	KED	EET PIT
	Instrumen	t ID: NEMO								
Total Recoverable	Prep	3005A			50 mL	50 mL	436345	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020A		1			438909	06/23/23 19:07	KED	EET PIT
	Instrumen	it ID: NEMO								

Eurofins Pittsburgh

6/29/2023

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-5I

Lab Sample ID: 180-156881-2

Date Collected: 05/16/23 17:10 Matrix: Water Date Received: 05/19/23 09:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			25 mL	25 mL	436996	06/05/23 12:00	MTW	EET PIT
Total/NA	Analysis	EPA 7470A t ID: HGZ		1			437135	06/06/23 12:48	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 9040C		1			436285	05/25/23 15:33	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	435869	05/22/23 16:09	LWM	EET PIT
Total/NA	Prep	PrecSep-21			976.31 mL	1.0 g	614557	06/06/23 10:30	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1		-	618151	06/28/23 18:23	FLC	EET SL
Total/NA	Prep	PrecSep 0			976.31 mL	1.0 g	614558	06/06/23 10:34	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1		-	617527	06/23/23 11:48	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228		1			618364	06/29/23 16:50	SCB	EET SL

Client Sample ID: WAP-5D Lab Sample ID: 180-156881-3

Date Collected: 05/16/23 16:10 Matrix: Water Date Received: 05/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A at ID: CHIC2100A		1	1 mL	1 mL	436051	05/24/23 12:09	SNL	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6010D It ID: Q		1	50 mL	50 mL	436357 438036	05/26/23 13:00 06/14/23 15:47		EET PIT EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A tt ID: NEMO		1	50 mL	50 mL	436345 438772	05/26/23 13:00 06/22/23 22:48		EET PIT EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A tt ID: NEMO		1	50 mL	50 mL	436345 438909	05/26/23 13:00 06/23/23 19:10		EET PIT EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A it ID: HGZ		1	25 mL	25 mL	436996 437135	06/05/23 12:00 06/06/23 12:49		EET PIT EET PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: OZ		1			436285	05/25/23 15:36	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	435869	05/22/23 16:09	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCRED		1	993.72 mL	1.0 g	613645 617000	05/30/23 10:07 06/21/23 09:29		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 tt ID: GFPCPURPLI	E	1	993.72 mL	1.0 g	613647 616863	05/30/23 10:18 06/20/23 14:34		EET SL EET SL

Eurofins Pittsburgh

6/29/2023

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Job ID: 180-156881-1

SDG: Culley West

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-156881-3 **Client Sample ID: WAP-5D** Date Collected: 05/16/23 16:10 **Matrix: Water**

Date Received: 05/19/23 09:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1			617151	06/21/23 14:54	SCB	EET SL

Client Sample ID: WAP-8S Lab Sample ID: 180-156881-4 Date Collected: 05/17/23 15:40 **Matrix: Water**

Date Received: 05/19/23 09:35

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 at ID: CHIC2100A	_ Kuii	1	1 mL	1 mL	436051	05/24/23 12:23		EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6010D at ID: Q		1	50 mL	50 mL	436357 438036	05/26/23 13:00 06/14/23 15:52		EET PIT EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A nt ID: NEMO		1	50 mL	50 mL	436345 438772	05/26/23 13:00 06/22/23 22:51		EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A at ID: NEMO		1	50 mL	50 mL	436345 438909	05/26/23 13:00 06/23/23 19:13		EET PIT EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A nt ID: HGZ		1	25 mL	25 mL	436996 437135	06/05/23 12:00 06/06/23 12:50		EET PIT EET PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: OZ		1			436285	05/25/23 15:39	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	435992	05/23/23 21:03	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 at ID: GFPCBLUE		1	984.09 mL	1.0 g	614557 618151	06/06/23 10:30 06/28/23 18:23		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 at ID: GFPCBLUE		1	984.09 mL	1.0 g	614558 617527	06/06/23 10:34 06/23/23 11:49		EET SL EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			618364	06/29/23 16:50	SCB	EET SL

Client Sample ID: WAP-8I Lab Sample ID: 180-156881-5 Date Collected: 05/17/23 13:15

Date Received: 05/19/23 09:35

Prep Type Total/NA	Batch Type Analysis Instrumer	Batch Method EPA 9056A at ID: CHIC2100A	Run	Factor 1	Initial Amount 1 mL	Final Amount 1 mL	Batch Number 436051	Prepared or Analyzed 05/24/23 12:37	Analyst SNL	Lab EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	436357	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis	EPA 6010D		1			438036	06/14/23 15:57	AAS	EET PIT
	Instrumer	t ID: Q								

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Job ID: 180-156881-1

SDG: Culley West

Matrix: Water

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-156881-5

Matrix: Water

Job ID: 180-156881-1

SDG: Culley West

Date Collected: 05/17/23 13:15 Date Received: 05/19/23 09:35

Client Sample ID: WAP-8I

Dran Time	Batch	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared	Amalyzat	Lab
Prep Type Total Recoverable	Prep	3005A	- Kuii	Factor	50 mL	50 mL	436345	or Analyzed 05/26/23 13:00	Analyst HCY	EET PIT
Total Recoverable	Analysis	EPA 6020A t ID: NEMO		1	00 IIIL	00 IIIL	438772	06/22/23 23:00		EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: NEMO		1	50 mL	50 mL	436345 438909	05/26/23 13:00 06/23/23 19:16		EET PIT EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGZ		1	25 mL	25 mL	436996 437135	06/05/23 12:00 06/06/23 12:51		EET PIT EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436285	05/25/23 15:42	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	435992	05/23/23 21:03	LWM	EET PIT
Total/NA	Prep	PrecSep-21			964.54 mL	1.0 g	614557	06/06/23 10:30	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1			618151	06/28/23 18:23	FLC	EET SL
Total/NA	Prep	PrecSep_0			964.54 mL	1.0 g	614558	06/06/23 10:34	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1			617527	06/23/23 11:49	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			618364	06/29/23 16:50	SCB	EET SL

Client Sample ID: WAP-8D

Date Collected: 05/17/23 14:20

Lab Sample ID: 180-156881-6

Matrix: Water

Date Collected: 05/17/23 14:20 Matrix: Water Date Received: 05/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 9056A at ID: CHIC2100A		1	1 mL	1 mL	436051	05/24/23 12:50	SNL	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6010D at ID: Q		1	50 mL	50 mL	436357 438036	05/26/23 13:00 06/14/23 16:02		EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A at ID: NEMO		1	50 mL	50 mL	436345 438772	05/26/23 13:00 06/22/23 23:03		EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A at ID: NEMO		1	50 mL	50 mL	436345 438909	05/26/23 13:00 06/23/23 19:18		EET PIT
Total/NA Total/NA	Prep Analysis Instrumer	7470A EPA 7470A nt ID: HGZ		1	25 mL	25 mL	436996 437135	06/05/23 12:00 06/06/23 12:52		EET PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: OZ		1			436285	05/25/23 15:45	BAB	EET PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	435992	05/23/23 21:03	LWM	EET PIT

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6/29/2023

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-8D Lab Sample ID: 180-156881-6 Date Collected: 05/17/23 14:20

Matrix: Water

Job ID: 180-156881-1

SDG: Culley West

Date Received: 05/19/23 09:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			996.81 mL	1.0 g	614557	06/06/23 10:30	KAC	EET SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			618151	06/28/23 18:23	FLC	EET SL
Total/NA	Prep	PrecSep_0			996.81 mL	1.0 g	614558	06/06/23 10:34	KAC	EET SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			617527	06/23/23 11:49	FLC	EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			618364	06/29/23 16:50	SCB	EET SL

Lab Sample ID: 180-156881-7 **Client Sample ID: WAP-4D**

Date Collected: 05/17/23 17:40 **Matrix: Water**

Date Received: 05/19/23 09:35

B T	Batch	Batch	D	Dil	Initial	Final	Batch	Prepared	A I 4	
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed		Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: CHIC2100A		1	1 mL	1 mL	436051	05/24/23 11:13	SINL	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	436357	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6010D t ID: Q		1			438036	06/14/23 16:07	AAS	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	436345	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			438772	06/22/23 23:06	KED	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	436345	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			438909	06/23/23 19:21	KED	EET PIT
Total/NA	Prep	7470A			25 mL	25 mL	436996	06/05/23 12:00	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			437135	06/06/23 12:53	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436285	05/25/23 15:19	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	435991	05/23/23 20:17	LWM	EET PIT
Total/NA	Prep	PrecSep-21			950.02 mL	1.0 g	614557	06/06/23 10:30	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1			618151	06/28/23 18:23	FLC	EET SL
Total/NA	Prep	PrecSep_0			950.02 mL	1.0 g	614558	06/06/23 10:34	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1			617527	06/23/23 11:49	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228		1			618364	06/29/23 16:50	SCB	EET SL

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-156881-8

Matrix: Water

Job ID: 180-156881-1

SDG: Culley West

Client Sample ID: WAP-41 Date Collected: 05/17/23 19:15 Date Received: 05/19/23 09:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 9056A at ID: CHIC2100A		1	1 mL	1 mL	436051	05/24/23 13:32	SNL	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	436357	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis Instrumer	EPA 6010D nt ID: Q		1			438036	06/14/23 16:32	AAS	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	436345	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis Instrumer	EPA 6020A nt ID: NEMO		1			438772	06/22/23 23:20	KED	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	436345	05/26/23 13:00	HCY	EET PIT
Total Recoverable	Analysis Instrumer	EPA 6020A nt ID: NEMO		1			438909	06/23/23 19:41	KED	EET PIT
Total/NA	Prep	7470A			25 mL	25 mL	436996	06/05/23 12:00	MTW	EET PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGZ		1			437135	06/06/23 12:57	MTW	EET PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: OZ		1			436285	05/25/23 15:25	BAB	EET PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	435992	05/23/23 21:03	LWM	EET PIT
Total/NA	Prep	PrecSep-21			742.24 mL	1.0 g	614557	06/06/23 10:30	KAC	EET SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1		-	618151	06/28/23 18:24	FLC	EET SL
Total/NA	Prep	PrecSep_0			742.24 mL	1.0 g	614558	06/06/23 10:34	KAC	EET SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1		-	617527	06/23/23 11:49	FLC	EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			618364	06/29/23 16:50	SCB	EET SL

Client Sample ID: DUP 1 Lab Sample ID: 180-156881-9

Date Collected: 05/17/23 00:00 Date Received: 05/19/23 09:35

	Batch	Batch		Dil	Initial	Final Amount	Batch Number	Prepared		
Prep Type	Type	Method	Run	Factor	Amount			or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	436051	05/24/23 13:46	SNL	EET PIT
	Instrument	ID: CHIC2100A								
Total Recoverable	Prep	3005A			25 mL	25 mL	436758	06/01/23 12:30	HCY	EET PIT
Total Recoverable	Analysis	EPA 6010D		1			437021	06/05/23 11:44	AAS	EET PIT
	Instrument	ID: Q								
Total Recoverable	Prep	3005A			25 mL	25 mL	436507	05/31/23 10:30	HCY	EET PIT
Total Recoverable	Analysis	EPA 6020A		1			438554	06/20/23 19:27	KED	EET PIT
	Instrument	ID: DORY								
Total/NA	Prep	7470A			25 mL	25 mL	437479	06/09/23 10:00	MTW	EET PIT
Total/NA	Analysis	EPA 7470A		1			437591	06/10/23 11:47	MTW	EET PIT
	Instrument	ID: HGZ								
Total/NA	Analysis	EPA 9040C		1			436285	05/25/23 15:27	BAB	EET PIT
	Instrument	ID: OZ								

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Matrix: Water

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-156881-9

Matrix: Water

Job ID: 180-156881-1

SDG: Culley West

Client Sample ID: DUP 1 Date Collected: 05/17/23 00:00 Date Received: 05/19/23 09:35

Prep Type Total/NA Total/NA Total/NA	Batch Type Analysis Prep Analysis	Batch Method SM 2540C PrecSep-21 9315	Run	Pactor 1	Amount 100 mL 995.54 mL	Final Amount 100 mL 1.0 g	Batch Number 435992 613645 617000	Prepared or Analyzed 05/23/23 21:03 05/30/23 10:07 06/21/23 09:30		EET SL EET SL
Total/NA Total/NA	Prep Analysis	t ID: GFPCRED PrecSep_0 9320 t ID: GFPCPURPLE		1	995.54 mL	1.0 g	613647 616863	05/30/23 10:18 06/20/23 14:34		EET SL EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			617151	06/21/23 14:54	SCB	EET SL

Laboratory References:

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

Analyst References:

Lab: EET PIT

Batch Type: Prep

HCY = Harrison Yaeger

MTW = Michael Wesoloski

Batch Type: Analysis

AAS = Arianna Swick

BAB = Brooke Batyi

KED = Katie Dacko

LWM = Leslie McIntire

MTW = Michael Wesoloski

SNL = Sean Lordo

Lab: EET SL

Batch Type: Prep

KAC = Kevin Cox

Batch Type: Analysis

FLC = Fernando Cruz

SCB = Sarah Bernsen

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Method: SW846 EPA 7470A - Mercury (CVAA)

Job ID: 180-156881-1 SDG: Culley West

Client Sample ID: WAP-5S

Date Collected: 05/16/23 18:15 Date Received: 05/19/23 09:35 Lab Sample ID: 180-156881-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110		1.0	0.71	mg/L			05/23/23 12:27	1
Fluoride	0.12		0.10	0.026	mg/L			05/23/23 12:27	1
Sulfate	480		1.0	0.76	mg/L			05/23/23 12:27	1
Method: SW846 EPA	A 6010D - Metals (ICP)	- Total Rec	overable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5900		200	12	ug/L		05/26/23 13:00	06/14/23 15:26	- 1

Method: SW846 EPA Analyte	· ·	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		05/26/23 13:00	06/22/23 22:42	1
Arsenic	0.00055	J	0.0010	0.00028	mg/L		05/26/23 13:00	06/22/23 22:42	1
Barium	0.037		0.010	0.0031	mg/L		05/26/23 13:00	06/22/23 22:42	1
Beryllium	ND		0.0010	0.00027	mg/L		05/26/23 13:00	06/22/23 22:42	1
Cadmium	ND		0.0010	0.00022	mg/L		05/26/23 13:00	06/22/23 22:42	1
Calcium	240		0.50	0.13	mg/L		05/26/23 13:00	06/22/23 22:42	1
Chromium	ND		0.0020	0.0015	mg/L		05/26/23 13:00	06/22/23 22:42	1
Cobalt	0.0037		0.00050	0.00026	mg/L		05/26/23 13:00	06/23/23 19:04	1
Lead	ND		0.0010	0.00038	mg/L		05/26/23 13:00	06/22/23 22:42	1
Lithium	0.0024	J	0.0050	0.0013	mg/L		05/26/23 13:00	06/22/23 22:42	1
Molybdenum	ND		0.0050	0.00061	mg/L		05/26/23 13:00	06/22/23 22:42	1
Selenium	ND		0.0050	0.00074	mg/L		05/26/23 13:00	06/22/23 22:42	1
Thallium	ND		0.0010	0.00047	mg/L		05/26/23 13:00	06/22/23 22:42	1

Analyte	Result	Qualifier	KL	MDL	Unit	ט	Prepared	Anaiyzed	DII Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/23 12:00	06/06/23 12:44	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1200		10	10	mg/L			05/22/23 16:09	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.0	HF	0.1	0.1	SU			05/25/23 15:30	1

Method: SW846	9315 - Radiu	ım-226 (GI	FPC)							
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0390	U	0.0635	0.0636	1.00	0.112	pCi/L	06/06/23 10:30	06/28/23 18:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.8		30 - 110					06/06/23 10:30	06/28/23 18:21	1

Method: SW846	9320 - Radiu	ım-228 (GF	PC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.762		0.415	0.421	1.00	0.589	pCi/L	06/06/23 10:34	06/23/23 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.8		30 - 110					06/06/23 10:34	06/23/23 11:48	1

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Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-156881-1 Client Sample ID: WAP-5S

Date Collected: 05/16/23 18:15 Date Received: 05/19/23 09:35

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

%Yield Qualifier Prepared Analyzed Dil Fac Y Carrier 82.2 30 - 110 06/06/23 10:34 06/23/23 11:48

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

Count Total Uncert. Uncert.

Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RLMDC Unit Prepared Dil Fac Analyzed **Combined Radium** 0.801 0.420 0.426 5.00 0.589 pCi/L 06/29/23 16:50

226 + 228

Client Sample ID: WAP-5I

Lab Sample ID: 180-156881-2 Date Collected: 05/16/23 17:10 **Matrix: Water**

Date Received: 05/19/23 09:35

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			05/23/23 12:42	1
Fluoride	0.14		0.10	0.026	mg/L			05/23/23 12:42	1
Sulfate	42		1.0	0.76	mg/L			05/23/23 12:42	1

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

Analyte Result Qualifier MDL Unit Prepared Analyzed 36 J 200 13 ug/L 05/26/23 13:00 06/14/23 15:31 **Boron**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		05/26/23 13:00	06/22/23 22:45	1
Arsenic	0.0046		0.0010	0.00028	mg/L		05/26/23 13:00	06/22/23 22:45	1
Barium	0.093		0.010	0.0031	mg/L		05/26/23 13:00	06/22/23 22:45	1
Beryllium	ND		0.0010	0.00027	mg/L		05/26/23 13:00	06/22/23 22:45	1
Cadmium	ND		0.0010	0.00022	mg/L		05/26/23 13:00	06/22/23 22:45	1
Calcium	35		0.50	0.13	mg/L		05/26/23 13:00	06/22/23 22:45	1
Chromium	ND		0.0020	0.0015	mg/L		05/26/23 13:00	06/22/23 22:45	1
Cobalt	ND		0.00050	0.00026	mg/L		05/26/23 13:00	06/23/23 19:07	1
Lead	ND		0.0010	0.00038	mg/L		05/26/23 13:00	06/22/23 22:45	1
Lithium	0.0031	J	0.0050	0.0013	mg/L		05/26/23 13:00	06/22/23 22:45	1
Molybdenum	0.0016	J	0.0050	0.00061	mg/L		05/26/23 13:00	06/22/23 22:45	1
Selenium	ND		0.0050	0.00074	mg/L		05/26/23 13:00	06/22/23 22:45	1
Thallium	ND		0.0010	0.00047	mg/L		05/26/23 13:00	06/22/23 22:45	1

Method: SW846 EPA 7470A - Mercury (CVAA)										
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac			
Mercury	ND -	0.00020	0.00013 mg/L	_	06/05/23 12:00	06/06/23 12:48	1			

General Chemistry

Concrat Chomical,										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids (SM 2540C)	200		10	10	mg/L			05/22/23 16:09	1	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac	
pH (SW846 EPA 9040C)	7.7	HF	0.1	0.1	SU			05/25/23 15:33	1	

Job ID: 180-156881-1

SDG: Culley West

Matrix: Water

Client Sample ID: WAP-5I

Date Collected: 05/16/23 17:10 Date Received: 05/19/23 09:35

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-156881-2

Matrix: Water

Job ID: 180-156881-1

SDG: Culley West

Method:	SW846	9315	- Radium-226	(GFPC)
metriou.	011040	3010	- Itaululli-LLU	(OIIO)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0619	U	0.0857	0.0858	1.00	0.145	pCi/L	06/06/23 10:30	06/28/23 18:23	1
Carrier Ba Carrier	%Yield 87.5	Qualifier	Limits 30 - 110					Prepared 06/06/23 10:30	Analyzed 06/28/23 18:23	Dil Fac

Method: CM946 0220 Podium 229 (CEDC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.325	U	0.317	0.319	1.00	0.507	pCi/L	06/06/23 10:34	06/23/23 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		30 - 110					06/06/23 10:34	06/23/23 11:48	1
Y Carrier	87.9		30 - 110					06/06/23 10:34	06/23/23 11:48	1

Method: TAL-STL Ra226 Ra228 - Combined Radium-226 and Radium-228

mothod: I/tE OIEI	.aa.		ibilioa itaai	aiii zzo aii	a i taaiai					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.387	U	0.328	0.330	5.00	0.507	pCi/L		06/29/23 16:50	1

Client Sample ID: WAP-5D

Date Collected: 05/16/23 16:10 Date Received: 05/19/23 09:35

Lab Sample ID: 180-156881-3

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Method. Stroto Li A 3	OJUA - Alliulia, luli	Cili Olliatogi	apily						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24		1.0	0.71	mg/L			05/24/23 12:09	1
Fluoride	0.15		0.10	0.026	mg/L			05/24/23 12:09	1
Sulfate	46		1.0	0.76	mg/L			05/24/23 12:09	1

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

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Boron	45 J	200	13 ug/L		05/26/23 13:00	06/14/23 15:47	1

Method: SW846 FPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result (Qualifier F	RL MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.00	0.00097	mg/L		05/26/23 13:00	06/22/23 22:48	1
Arsenic	0.0099	0.00	0.00028	mg/L		05/26/23 13:00	06/22/23 22:48	1
Barium	0.22	0.0	0.0031	mg/L		05/26/23 13:00	06/22/23 22:48	1
Beryllium	ND	0.00	0.00027	mg/L		05/26/23 13:00	06/22/23 22:48	1
Cadmium	ND	0.00	0.00022	mg/L		05/26/23 13:00	06/22/23 22:48	1
Calcium	50	0.9	0.13	mg/L		05/26/23 13:00	06/22/23 22:48	1
Chromium	ND	0.00	0.0015	mg/L		05/26/23 13:00	06/22/23 22:48	1
Cobalt	ND	0.000	0.00026	mg/L		05/26/23 13:00	06/23/23 19:10	1
Lead	ND	0.00	0.00038	mg/L		05/26/23 13:00	06/22/23 22:48	1
Lithium	0.0017	J 0.00	0.0013	mg/L		05/26/23 13:00	06/22/23 22:48	1
Molybdenum	0.0039	J 0.00	0.00061	mg/L		05/26/23 13:00	06/22/23 22:48	1
Selenium	ND	0.00	0.00074	mg/L		05/26/23 13:00	06/22/23 22:48	1

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Matrix: Water

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-156881-3

Matrix: Water

Date Collected: 05/16/23 16:10 Date Received: 05/19/23 09:35

Client Sample ID: WAP-5D

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00047	mg/L		05/26/23 13:00	06/22/23 22:48	1
Method: SW846 EPA 7470A - Me	rcury (CV	/AA)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/23 12:00	06/06/23 12:49	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	240		10	10	mg/L			05/22/23 16:09	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.6	HE	0.1	0.1	SU			05/25/23 15:36	

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.286		0.177	0.179	1.00	0.221	pCi/L	05/30/23 10:07	06/21/23 09:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		30 - 110					05/30/23 10:07	06/21/23 09:29	1

Method: SW846	9320 - Radiu	m-228 (GF	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.225	U	0.352	0.352	1.00	0.598	pCi/L	05/30/23 10:18	06/20/23 14:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		30 - 110					05/30/23 10:18	06/20/23 14:34	1
Y Carrier	81.9		30 - 110					05/30/23 10:18	06/20/23 14:34	1

Method: TAL-STL R	a226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.511	U	0.394	0.395	5.00	0.598	pCi/L		06/21/23 14:54	1

Client Sample ID: WAP-8S

Date Collected: 05/17/23 15:40

Date Received: 05/19/23 09:35

Lab Sample ID: 180-156881-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	69		1.0	0.71	mg/L			05/24/23 12:23	1
Fluoride	0.17		0.10	0.026	mg/L			05/24/23 12:23	1
Sulfate	270		1.0	0.76	mg/L			05/24/23 12:23	1
⊡ Method: SW846 EPA	\ 6010D - Metals (ICP)	- Total Reco	overable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Boron	2900		200	13	ug/L		05/26/23 13:00	06/14/23 15:52	

Project/Site: CCR Groundwater Monitoring FB Culley SDG: Culley West **Client Sample ID: WAP-8S**

Lab Sample ID: 180-156881-4

Matrix: Water

Date Collected: 05/17/23 15:40 Date Received: 05/19/23 09:35

Analyte	Result Qua	lifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.0020	0.00097	mg/L		05/26/23 13:00	06/22/23 22:51	1
Arsenic	0.016	0.0010	0.00028	mg/L		05/26/23 13:00	06/22/23 22:51	1
Barium	0.20	0.010	0.0031	mg/L		05/26/23 13:00	06/22/23 22:51	1
Beryllium	ND	0.0010	0.00027	mg/L		05/26/23 13:00	06/22/23 22:51	1
Cadmium	ND	0.0010	0.00022	mg/L		05/26/23 13:00	06/22/23 22:51	1
Calcium	140	0.50	0.13	mg/L		05/26/23 13:00	06/22/23 22:51	1
Chromium	ND	0.0020	0.0015	mg/L		05/26/23 13:00	06/22/23 22:51	1
Cobalt	0.0012	0.00050	0.00026	mg/L		05/26/23 13:00	06/23/23 19:13	1
Lead	ND	0.0010	0.00038	mg/L		05/26/23 13:00	06/22/23 22:51	1
Lithium	0.023	0.0050	0.0013	mg/L		05/26/23 13:00	06/22/23 22:51	1
Molybdenum	0.21	0.0050	0.00061	mg/L		05/26/23 13:00	06/22/23 22:51	1
Selenium	ND	0.0050	0.00074	mg/L		05/26/23 13:00	06/22/23 22:51	1
Thallium	ND	0.0010	0.00047	mg/L		05/26/23 13:00	06/22/23 22:51	1
Method: SW846 EPA 7	470A - Mercury (CVAA)							
Analyte	Result Qua		MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND	0.00020	0.00013	mg/L		06/05/23 12:00	06/06/23 12:50	

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	720		10	10	mg/L			05/23/23 21:03	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.7	HF	0.1	0.1	SU			05/25/23 15:39	1

Method: SW846 9	315 - Radiu	m-226 (GF	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.247		0.121	0.123	1.00	0.151	pCi/L	06/06/23 10:30	06/28/23 18:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		30 - 110					06/06/23 10:30	06/28/23 18:23	1

Method: SW846	9320 - Radiu	m-228 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.799		0.429	0.435	1.00	0.601	pCi/L	06/06/23 10:34	06/23/23 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		30 - 110					06/06/23 10:34	06/23/23 11:49	1
Y Carrier	77.0		30 - 110					06/06/23 10:34	06/23/23 11:49	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
	_		Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.05		0.446	0.452	5.00	0.601	pCi/L	_	06/29/23 16:50	1

Client Sample ID: WAP-8I

Date Collected: 05/17/23 13:15

Date Received: 05/19/23 09:35

Calcium

Chromium

Cobalt Lead

SDG: Culley West

Lab Sample ID: 180-156881-5

05/26/23 13:00 06/22/23 23:00

05/26/23 13:00 06/22/23 23:00

05/26/23 13:00 06/23/23 19:16

05/26/23 13:00 06/22/23 23:00

Job ID: 180-156881-1

Matrix: Water

Method: SW846 EPA	9056A - Anions, Ion	Chromatog	raphy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25		1.0	0.71	mg/L			05/24/23 12:37	1
Fluoride	0.20		0.10	0.026	mg/L			05/24/23 12:37	1
Sulfate	53		1.0	0.76	mg/L			05/24/23 12:37	1
Method: SW846 EPA	6010D - Metals (ICP)	- Total Rec	coverable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	73	J	200	13	ug/L		05/26/23 13:00	06/14/23 15:57	1
Method: SW846 EPA	. 6020A - Metals (ICP/	MS) - Total	Recoverab	le					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		05/26/23 13:00	06/22/23 23:00	1
Arsenic	0.0092		0.0010	0.00028	mg/L		05/26/23 13:00	06/22/23 23:00	1
Barium	0.063		0.010	0.0031	mg/L		05/26/23 13:00	06/22/23 23:00	1
Beryllium	ND		0.0010	0.00027	mg/L		05/26/23 13:00	06/22/23 23:00	1
Cadmium	ND		0.0010	0.00022	mg/L		05/26/23 13:00	06/22/23 23:00	1

Mercury	ND	0.00020	0.00013	ma/l		06/05/23 12:00	06/06/23 12:51	1
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 EPA 7470A - I	Mercury (CVAA)							
Thallium	ND	0.0010	0.00047	mg/L		05/26/23 13:00	06/22/23 23:00	1
Selenium	ND	0.0050	0.00074	mg/L		05/26/23 13:00	06/22/23 23:00	1
Molybdenum	0.028	0.0050	0.00061	mg/L		05/26/23 13:00	06/22/23 23:00	1
Lithium	0.0026 J	0.0050	0.0013	mg/L		05/26/23 13:00	06/22/23 23:00	1

0.50

0.0020

0.00050

0.0010

47

ND

ND

0.00034 J

0.13 mg/L

0.0015 mg/L

0.00026 mg/L

0.00038 mg/L

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	230		10	10	mg/L			05/23/23 21:03	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.6	HF	0.1	0.1	SU			05/25/23 15:42	1

Method: SW846	9315 - Radiu	ım-226 (GI	FPC)							
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0934	U	0.0991	0.0995	1.00	0.159	pCi/L	06/06/23 10:30	06/28/23 18:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		30 - 110					06/06/23 10:30	06/28/23 18:23	1

Method: SW846 93	320 - Radiu	ım-228 (GF	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.543	U	0.430	0.433	1.00	0.674	pCi/L	06/06/23 10:34	06/23/23 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.6		30 - 110					06/06/23 10:34	06/23/23 11:49	1

Job ID: 180-156881-1 SDG: Culley West

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-156881-5

Matrix: Water

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

%Yield Qualifier Prepared Analyzed Dil Fac Y Carrier 84.9 30 - 110 06/06/23 10:34 06/23/23 11:49

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

			Count	Total					
			Uncert.	Uncert.					
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.636	U	0.441	0.444	5.00	0.674 pCi/L		06/29/23 16:50	1

Client: Haley & Aldrich, Inc.

Client Sample ID: WAP-81

Date Collected: 05/17/23 13:15

Date Received: 05/19/23 09:35

Lab Sample ID: 180-156881-6 Client Sample ID: WAP-8D Date Collected: 05/17/23 14:20 **Matrix: Water**

Date Received: 05/19/23 09:35

Method: SW846 EPA 9056A - Anions, Ion Chromatography Analyte Result Qualifier RI MDL Unit D Analyzed Dil Fac Prepared 05/24/23 12:50 Chloride 24 1.0 0.71 mg/L **Fluoride** 0.10 0.026 mg/L 05/24/23 12:50 0.18 05/24/23 12:50 1.0 0.76 mg/L **Sulfate 56**

Method: SW846 EPA 6010D - Metals (ICP) - Total Recoverable Analyte Result Qualifier MDL Unit Prepared Analyzed Dil Fac

55 J 200 13 ug/L 05/26/23 13:00 06/14/23 16:02 **Boron**

Method: SW846 EPA 6020A - Metals (ICP/MS) - Total Recoverable **Analyte** Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Antimony $\overline{\mathsf{ND}}$ 0.0020 0.00097 mg/L 05/26/23 13:00 06/22/23 23:03 0.00028 mg/L 0.0028 0.0010 05/26/23 13:00 06/22/23 23:03 **Arsenic Barium** 0.079 0.010 0.0031 mg/L 05/26/23 13:00 06/22/23 23:03 0.00027 mg/L 06/22/23 23:03 Beryllium ND 0.0010 05/26/23 13:00 Cadmium 0.0010 0.00022 mg/L 05/26/23 13:00 06/22/23 23:03 ND 0.50 05/26/23 13:00 06/22/23 23:03 **Calcium 50** 0.13 mg/L Chromium ND 0.0020 0.0015 mg/L 05/26/23 13:00 06/22/23 23:03 Cobalt ND 0.00050 0.00026 mg/L 05/26/23 13:00 06/23/23 19:18 Lead ND 0.0010 0.00038 mg/L 05/26/23 13:00 06/22/23 23:03 05/26/23 13:00 06/22/23 23:03 Lithium 0.0020 0.0050 0.0013 mg/L Molybdenum 0.0012 0.0050 0.00061 mg/L 05/26/23 13:00 06/22/23 23:03 Selenium ND 0.0050 0.00074 mg/L 05/26/23 13:00 06/22/23 23:03 Thallium ND 0.00047 mg/L 0.0010 05/26/23 13:00 06/22/23 23:03

Method: SW846 EPA 7470A - Mercury (CVAA) Result Qualifier Analyte RL **MDL** Unit Prepared Analyzed Dil Fac Mercury ND 0.00020 0.00013 mg/L 06/05/23 12:00 06/06/23 12:52

General Chemistry Analyte Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac **Total Dissolved Solids (SM 2540C)** 240 10 10 mg/L 05/23/23 21:03 RL RL D Analyte Result Qualifier Unit Prepared Analyzed Dil Fac SU pH (SW846 EPA 9040C) 7.7 HF 0.1 0.1 05/25/23 15:45

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6/29/2023

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-8D Lab Sample ID: 180-156881-6 Date Collected: 05/17/23 14:20 **Matrix: Water**

Date Received: 05/19/23 09:35

Method: SW846 9315 - Radium-226 (GFPC)

Michiga. Ovvo-ro			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.165		0.105	0.106	1.00	0.145	pCi/L	06/06/23 10:30	06/28/23 18:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		30 - 110					06/06/23 10:30	06/28/23 18:23	1

Method: SW846 9320 - Radium-228 (GFPC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.00455	U	0.282	0.282	1.00	0.534	pCi/L	06/06/23 10:34	06/23/23 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		30 - 110					06/06/23 10:34	06/23/23 11:49	1
Y Carrier	84.9		30 - 110					06/06/23 10:34	06/23/23 11:49	1

Method: TAL-STL Ra226 Ra228 - Combined Radium-226 and Radium-228

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.160	U	0.301	0.301	5.00	0.534	pCi/L		06/29/23 16:50	1
+ 228										

Client Sample ID: WAP-4D

Date Received: 05/19/23 09:35

Lab Sample ID: 180-156881-7 Date Collected: 05/17/23 17:40 **Matrix: Water**

Method: SW846 EPA 90	56A - Anions, Ion	Chromatog	raphy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24		1.0	0.71	mg/L			05/24/23 11:13	1
Fluoride	0.16		0.10	0.026	mg/L			05/24/23 11:13	1
Sulfate	33		1.0	0.76	mg/L			05/24/23 11:13	1

Method: SW846 EPA 6010D - N	Metals (ICP)	- Total Re	coverable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	44	J	200	13	ug/L		05/26/23 13:00	06/14/23 16:07	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		05/26/23 13:00	06/22/23 23:06	1
Arsenic	0.0098		0.0010	0.00028	mg/L		05/26/23 13:00	06/22/23 23:06	1
Barium	0.30		0.010	0.0031	mg/L		05/26/23 13:00	06/22/23 23:06	1
Beryllium	ND		0.0010	0.00027	mg/L		05/26/23 13:00	06/22/23 23:06	1
Cadmium	ND		0.0010	0.00022	mg/L		05/26/23 13:00	06/22/23 23:06	1
Calcium	52		0.50	0.13	mg/L		05/26/23 13:00	06/22/23 23:06	1
Chromium	ND		0.0020	0.0015	mg/L		05/26/23 13:00	06/22/23 23:06	1
Cobalt	ND		0.00050	0.00026	mg/L		05/26/23 13:00	06/23/23 19:21	1
Lead	ND		0.0010	0.00038	mg/L		05/26/23 13:00	06/22/23 23:06	1
Lithium	0.0023	J	0.0050	0.0013	mg/L		05/26/23 13:00	06/22/23 23:06	1
Molybdenum	0.0050		0.0050	0.00061	mg/L		05/26/23 13:00	06/22/23 23:06	1
Selenium	ND		0.0050	0.00074	mg/L		05/26/23 13:00	06/22/23 23:06	1

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Job ID: 180-156881-1

SDG: Culley West

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-156881-7

Matrix: Water

Date Collected: 05/17/23 17:40 Date Received: 05/19/23 09:35

Client Sample ID: WAP-4D

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00047	mg/L		05/26/23 13:00	06/22/23 23:06	1
Method: SW846 EPA 7470A - Me	rcury (CV	/AA)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/05/23 12:00	06/06/23 12:53	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	230		10	10	mg/L			05/23/23 20:17	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.8	HE	0.1	0.1	SU			05/25/23 15:19	1

Method: SW846	9315 - Raulu	IIII-226 (GI	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.385		0.153	0.157	1.00	0.178	pCi/L	06/06/23 10:30	06/28/23 18:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		30 - 110					06/06/23 10:30	06/28/23 18:23	1

Method: SW846	9320 - Radiu	ım-228 (GF	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.626	U	0.491	0.494	1.00	0.766	pCi/L	06/06/23 10:34	06/23/23 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.2		30 - 110					06/06/23 10:34	06/23/23 11:49	1
Y Carrier	78.1		30 - 110					06/06/23 10:34	06/23/23 11:49	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.01		0.514	0.518	5.00	0.766	pCi/L		06/29/23 16:50	1

Client Sample ID: WAP-4I

Date Collected: 05/17/23 19:15

Date Received: 05/19/23 09:35

Lab Sample ID: 180-156881-8

Matrix: Water

•	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18 <i>'</i>	^2	1.0	0.71	mg/L			05/24/23 13:32	1
Fluoride	0.14		0.10	0.026	mg/L			05/24/23 13:32	1
Sulfate	40		1.0	0.76	mg/L			05/24/23 13:32	1

Client Sample ID: WAP-4I

Date Collected: 05/17/23 19:15

Date Received: 05/19/23 09:35

SDG: Culley West

Lab Sample ID: 180-156881-8

Matrix: Water

Job ID: 180-156881-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony	ND		0.0020	0.00097	mg/L		05/26/23 13:00	06/22/23 23:20	
Arsenic	0.017		0.0010	0.00028	mg/L		05/26/23 13:00	06/22/23 23:20	
Barium	0.14		0.010	0.0031	mg/L		05/26/23 13:00	06/22/23 23:20	
Beryllium	ND		0.0010	0.00027	mg/L		05/26/23 13:00	06/22/23 23:20	
Cadmium	0.00022	J	0.0010	0.00022	mg/L		05/26/23 13:00	06/22/23 23:20	
Calcium	32		0.50	0.13	mg/L		05/26/23 13:00	06/22/23 23:20	
Chromium	ND		0.0020	0.0015	mg/L		05/26/23 13:00	06/22/23 23:20	
Cobalt	0.00050		0.00050	0.00026	mg/L		05/26/23 13:00	06/23/23 19:41	
Lead	0.00046	J	0.0010	0.00038	mg/L		05/26/23 13:00	06/22/23 23:20	
Lithium	0.0029	J	0.0050	0.0013	mg/L		05/26/23 13:00	06/22/23 23:20	
Molybdenum	0.0018	J	0.0050	0.00061	mg/L		05/26/23 13:00	06/22/23 23:20	
Selenium	ND		0.0050	0.00074	mg/L		05/26/23 13:00	06/22/23 23:20	
Thallium	0.00048	J	0.0010	0.00047	mg/L		05/26/23 13:00	06/22/23 23:20	
<u> </u>	Result ND	Qualifier	- RL 0.00020	MDL 0.00013		_ <u>D</u>	Prepared 06/05/23 12:00	Analyzed 06/06/23 12:57	
Mercury General Chemistry	ND	•	0.00020	0.00013	mg/L	_ <u>D</u>			
Mercury General Chemistry Analyte	ND Result	Qualifier Qualifier	0.00020	0.00013	mg/L Unit	_ <u>D</u>		06/06/23 12:57 Analyzed	
Mercury General Chemistry Analyte	ND Result	•	0.00020	0.00013	mg/L		06/05/23 12:00	06/06/23 12:57	Dil Fa
Mercury General Chemistry Analyte Total Dissolved Solids (SM 2540)	Result 170	•	0.00020	0.00013 MDL 10	mg/L Unit		06/05/23 12:00	06/06/23 12:57 Analyzed	Dil Fa
Analyte Mercury General Chemistry Analyte Total Dissolved Solids (SM 2540 Analyte pH (SW846 EPA 9040C)	Result 170 Result	Qualifier	0.00020 RL 10	0.00013 MDL 10	mg/L Unit mg/L Unit	_ <u>D</u>	06/05/23 12:00 Prepared	06/06/23 12:57 Analyzed 05/23/23 21:03	Dil Fa
Mercury General Chemistry Analyte Total Dissolved Solids (SM 2540 Analyte pH (SW846 EPA 9040C) Method: SW846 9315 - Rad	Result (C) 170 Result 7.7 ium-226 (GFP)	Qualifier Qualifier HF	0.00020 RL 10 RL	0.00013 MDL 10 RL 0.1	mg/L Unit mg/L Unit SU	_ <u>D</u>	06/05/23 12:00 Prepared	06/06/23 12:57 Analyzed 05/23/23 21:03 Analyzed	Dil Fa
Mercury General Chemistry Analyte Total Dissolved Solids (SM 2540 Analyte pH (SW846 EPA 9040C) Method: SW846 9315 - Rad Analyte Resu	Result 7.7 ium-226 (GFP)	Qualifier HF C) Count Uncert. (2σ+/-)	0.00020 RL	0.00013 MDL 10 RL 0.1	mg/L Unit mg/L Unit SU	_ <u>D</u>	Prepared Prepared Prepared	06/06/23 12:57 Analyzed 05/23/23 21:03 Analyzed 05/25/23 15:25 Analyzed	Dil Fa
Mercury General Chemistry Analyte Total Dissolved Solids (SM 2540 Analyte pH (SW846 EPA 9040C) Method: SW846 9315 - Rad	Result 7.7 ium-226 (GFP)	Qualifier HF C) Count Uncert.	0.00020 RL 10 RL 0.1 Total Uncert.	0.00013 MDL 10 RL 0.1	mg/L Unit mg/L Unit SU	_ <u>D</u>	Prepared Prepared	06/06/23 12:57 Analyzed 05/23/23 21:03 Analyzed 05/25/23 15:25	Dil Fa
Mercury General Chemistry Analyte Total Dissolved Solids (SM 2540 Analyte pH (SW846 EPA 9040C) Method: SW846 9315 - Rad Analyte Radium-226 0.26	Result 7.7 ium-226 (GFP)	Qualifier HF C) Count Uncert. (2σ+/-)	0.00020 RL	0.00013 MDL 10 RL 0.1	mg/L Unit mg/L Unit SU	_ <u>D</u>	Prepared Prepared Prepared	06/06/23 12:57 Analyzed 05/23/23 21:03 Analyzed 05/25/23 15:25 Analyzed	Dil Fa

Method: SW846	9320 - Radiu	ım-228 (GI	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.722		0.487	0.491	1.00	0.719	pCi/L	06/06/23 10:34	06/23/23 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		30 - 110					06/06/23 10:34	06/23/23 11:49	1
Y Carrier	77.4		30 - 110					06/06/23 10:34	06/23/23 11:49	1

Method: TAL-STL I	Ra226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.986		0.506	0.510	5.00	0.719	pCi/L		06/29/23 16:50	1

Project/Site: CCR Groundwater Monitoring FB Culley

SDG: Culley West

Lab Sample ID: 180-156881-9

Client Sample ID: DUP 1 Date Collected: 05/17/23 00:00 Date Received: 05/19/23 09:35

Matrix: Water

Job ID: 180-156881-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	70	^2	1.0	0.71	mg/L			05/24/23 13:46	1
Fluoride	0.17		0.10	0.026	mg/L			05/24/23 13:46	1
Sulfate	280		1.0	0.76	mg/L			05/24/23 13:46	1
Method: SW846 EPA 6	010D - Metals (ICP)	- Total Red	coverable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2500		200	13	ug/L		06/01/23 12:30	06/05/23 11:44	1
Method: SW846 EPA 6	020A - Metals (ICP)	MS) - Total	Recoverab	le					
Analyte	•	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		05/31/23 10:30	06/20/23 19:27	1
Arsenic	0.017		0.0010	0.00028	mg/L		05/31/23 10:30	06/20/23 19:27	1
Barium	0.20		0.010	0.0031	mg/L		05/31/23 10:30	06/20/23 19:27	1
Beryllium	ND		0.0010	0.00027	mg/L		05/31/23 10:30	06/20/23 19:27	1
Cadmium	ND		0.0010	0.00022	mg/L		05/31/23 10:30	06/20/23 19:27	1
Calcium	140		0.50	0.13	mg/L		05/31/23 10:30	06/20/23 19:27	1
	ND		0.0020	0.0015	mg/L		05/31/23 10:30	06/20/23 19:27	1
Chromium					ma/l		05/31/23 10:30	06/20/23 19:27	1
Cobalt Cobalt	0.0014		0.00050	0.00026	mg/L		00/01/20 10:00		
	0.0014 ND		0.00050 0.0010	0.00026 0.00038	Ü			06/20/23 19:27	1
Cobalt	*****				mg/L		05/31/23 10:30	06/20/23 19:27 06/20/23 19:27	1 1
Cobalt Lead	ND		0.0010	0.00038	mg/L mg/L		05/31/23 10:30 05/31/23 10:30		1 1 1
Cobalt Lead Lithium	ND 0.026		0.0010 0.0050	0.00038 0.0013	mg/L mg/L mg/L		05/31/23 10:30 05/31/23 10:30 05/31/23 10:30	06/20/23 19:27	1 1 1 1

Method: SW846 EPA 7470A - M	ercury (CVAA)							
Analyte	Result Qualifier	RL	MDL U	Jnit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013 n	ng/L		06/09/23 10:00	06/10/23 11:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	690		10	10	mg/L			05/23/23 21:03	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.7	HF	0.1	0.1	SU			05/25/23 15:27	1

Method: SW846	9315 - Radiu	m-226 (GF	FPC)							
		•	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.225		0.152	0.154	1.00	0.193	pCi/L	05/30/23 10:07	06/21/23 09:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		30 - 110					05/30/23 10:07	06/21/23 09:30	1

Method: SW846	9320 - Radiu	ım-228 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.745		0.412	0.417	1.00	0.585	pCi/L	05/30/23 10:18	06/20/23 14:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		30 - 110					05/30/23 10:18	06/20/23 14:34	1

Client Sample Results

Client: Haley & Aldrich, Inc.

Job ID: 180-156881-1 Project/Site: CCR Groundwater Monitoring FB Culley SDG: Culley West

Client Sample ID: DUP 1 Lab Sample ID: 180-156881-9

Date Collected: 05/17/23 00:00 **Matrix: Water** Date Received: 05/19/23 09:35

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

%Yield Qualifier Limits Prepared Analyzed Dil Fac Y Carrier 80.7 30 - 110 05/30/23 10:18 06/20/23 14:34

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

Count Total Uncert. Uncert.

Dil Fac Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RLMDC Unit Prepared Analyzed **Combined Radium** 0.969 0.439 0.445 5.00 0.585 pCi/L 06/21/23 14:54

226 + 228

Job ID: 180-156881-1

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

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-435928/6

Matrix: Water

Analysis Batch: 435928

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

MB MB Analyte Result Qualifier RL **MDL** Unit D Analyzed Dil Fac **Prepared** Chloride ND 1.0 0.71 mg/L 05/23/23 10:29 0.026 mg/L Fluoride ND 0.10 05/23/23 10:29 Sulfate ND 1.0 0.76 mg/L 05/23/23 10:29

Lab Sample ID: LCS 180-435928/7

Matrix: Water

Analysis Batch: 435928

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

Spike LCS LCS %Rec Limits Analyte Added Result Qualifier Unit D %Rec Chloride 50.0 48.7 mg/L 97 80 - 120 Fluoride 2.50 2.50 mg/L 100 80 - 120 Sulfate 50.0 47.8 mg/L 96 80 - 120

Lab Sample ID: MB 180-436051/6

Matrix: Water

Analysis Batch: 436051

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Type: Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			05/24/23 10:46	1
Fluoride	ND		0.10	0.026	mg/L			05/24/23 10:46	1
Sulfate	ND		1.0	0.76	mg/L			05/24/23 10:46	1

MR MR

33

Lab Sample ID: LCS 180-436051/7

Matrix: Water

Analysis Batch: 436051

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	53.6		mg/L		107	80 - 120	
Fluoride	2.50	2.74		mg/L		110	80 - 120	
Sulfate	50.0	53.3		mg/L		107	80 - 120	

Lab Sample ID: 180-156881-7 MS

Matrix: Water

Analysis Batch: 436051										
_	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	24		50.0	73.1		mg/L		99	80 - 120	
Fluoride	0.16		2.50	2.90		mg/L		109	80 - 120	

50.0

Lab Sample ID: 180-156881-7 MSD

Sulfate

Matrix: Water Analysis Batch: 436051									Prep Ty	/pe: Tot	al/NA	
Analysis Daton. 430031	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	

81.1

mg/L

Chloride 24 50.0 72.8 80 - 120 15 mg/L 98 0 Fluoride 2.50 mg/L 0.16 2.93 111 80 - 120 15 Sulfate 50.0 mg/L 33 81.8 80 - 120 15

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Client Sample ID: WAP-4D

Prep Type: Total/NA

80 - 120

Client Sample ID: WAP-4D

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Job ID: 180-156881-1 SDG: Culley West

Method: EPA 6010D - Metals (ICP)

Lab Sample ID: MB 180-436357/1-A

Matrix: Water

Analysis Batch: 438036

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

Prep Batch: 436357

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte D Prepared 200 Boron ND 13 ug/L 05/26/23 13:00 06/14/23 14:01

Lab Sample ID: LCS 180-436357/2-A **Client Sample ID: Lab Control Sample Matrix: Water**

Prep Type: Total Recoverable Prep Batch: 436357

Analysis Batch: 438036

Spike LCS LCS %Rec Added Result Qualifier Limits

Unit D %Rec Analyte 1250 80 - 120 Boron 1340 ug/L 107

Lab Sample ID: 180-156881-7 MS Client Sample ID: WAP-4D **Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 438036 Prep Batch: 436357 Sample Sample Spike MS MS %Rec

Result Qualifier Added Result Qualifier Limits Analyte Unit %Rec Boron 44 J 1250 1340 75 - 125 ug/L

Lab Sample ID: 180-156881-7 MSD

Matrix: Water

Analysis Batch: 438036

Prep Batch: 436357 Spike MSD MSD %Rec Sample Sample **RPD**

Added Analyte Result Qualifier Result Qualifier Unit %Rec Limits **RPD** Limit 1250 1420 75 - 125 Boron ug/L 110

Lab Sample ID: MB 180-436758/1-A

Matrix: Water

Analysis Batch: 437021

Client Sample ID: Method Blank Prep Type: Total Recoverable

Client Sample ID: WAP-4D

Prep Type: Total Recoverable

Prep Batch: 436758

MR MR

Analyte RL **MDL** Unit Result Qualifier Prepared Analyzed Dil Fac Boron 200 13 ug/L 06/01/23 12:30 06/05/23 10:26 ND

LCS LCS

Lab Sample ID: LCS 180-436758/2-A

Matrix: Water

Analysis Batch: 437021

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

Prep Batch: 436758

%Rec

Added Result Qualifier Limits Analyte Unit D %Rec 1250 1240 Boron ug/L 99 80 - 120

Spike

Method: EPA 6020A - Metals (ICP/MS)

Lab Sample ID: MB 180-436345/1-A

Matrix: Water

Analysis Batch: 438772

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

Prep Batch: 436345

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	·	0.0020	0.00097	mg/L		05/26/23 13:00	06/22/23 21:56	1
Arsenic	ND		0.0010	0.00028	mg/L		05/26/23 13:00	06/22/23 21:56	1
Barium	ND		0.010	0.0031	mg/L		05/26/23 13:00	06/22/23 21:56	1
Beryllium	ND		0.0010	0.00027	mg/L		05/26/23 13:00	06/22/23 21:56	1
Cadmium	ND		0.0010	0.00022	mg/L		05/26/23 13:00	06/22/23 21:56	1
Calcium	ND		0.50	0.13	mg/L		05/26/23 13:00	06/22/23 21:56	1

Project/Site: CCR Groundwater Monitoring FB Culley

Job ID: 180-156881-1 SDG: Culley West

Method: EPA 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 180-436345/1-A

Lab Sample ID: MB 180-436345/1-A

Lab Sample ID: LCS 180-436345/2-A

Lab Sample ID: LCS 180-436345/2-A

Matrix: Water

Analysis Batch: 438772

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

Prep Batch: 436345

•	MB MB						•	
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND	0.0020	0.0015	mg/L		05/26/23 13:00	06/22/23 21:56	1
Lead	ND	0.0010	0.00038	mg/L		05/26/23 13:00	06/22/23 21:56	1
Lithium	ND	0.0050	0.0013	mg/L		05/26/23 13:00	06/22/23 21:56	1
Molybdenum	ND	0.0050	0.00061	mg/L		05/26/23 13:00	06/22/23 21:56	1
Selenium	ND	0.0050	0.00074	mg/L		05/26/23 13:00	06/22/23 21:56	1
Thallium	ND	0.0010	0.00047	mg/L		05/26/23 13:00	06/22/23 21:56	1

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 436345

Matrix: Water

Matrix: Water

Matrix: Water

Analysis Batch: 438909

Analysis Batch: 438909

MB MB

Analyte Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac Cobalt ND 0.00050 0.00026 mg/L 05/26/23 13:00 06/23/23 18:29

> **Client Sample ID: Lab Control Sample Prep Type: Total Recoverable**

Prep Batch: 436345

Analysis Batch: 438772 Spike LCS LCS %Rec Added Result Qualifier Unit Limits Analyte %Rec 0.250 0.235 94 80 - 120 Antimony mg/L Arsenic 1.00 0.810 mg/L 81 80 - 120 0.895 Barium 1.00 mg/L 89 80 - 120 Beryllium 0.500 0.485 97 80 - 120 mg/L Cadmium 0.500 0.427 85 80 - 120 mg/L Calcium 25.0 24.5 mg/L 98 80 - 120 Chromium 0.500 0.422 mg/L 84 80 - 120 Lead 0.500 0.438 80 - 120 mg/L 88 Lithium 0.500 0.502 mg/L 100 80 - 120Molybdenum 0.500 0.445 89 80 - 120 mg/L Selenium 1.00 0.981 mg/L 98 80 - 120 Thallium 1.00 0.859 mg/L 86 80 - 120

> **Client Sample ID: Lab Control Sample Prep Type: Total Recoverable**

> > **Prep Batch: 436345**

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Cobalt 0.500 0.433 mg/L 80 - 120

Lab Sample ID: 180-156881-7 MS Client Sample ID: WAP-4D **Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 438772 **Prep Batch: 436345**

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	ND		0.250	0.276		mg/L		111	75 - 125	
Arsenic	0.0098		1.00	0.912		mg/L		90	75 - 125	
Barium	0.30		1.00	1.31		mg/L		101	75 - 125	
Beryllium	ND		0.500	0.449		mg/L		90	75 - 125	
Cadmium	ND		0.500	0.467		mg/L		93	75 - 125	
Calcium	52		25.0	76.8		mg/L		100	75 - 125	

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Job ID: 180-156881-1 SDG: Culley West

Method: EPA 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-156881-7 MS

Matrix: Water

Analysis Batch: 438772

Client Sample ID: WAP-4D Prep Type: Total Recoverable

Prep Batch: 436345

	Sample :	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chromium	ND		0.500	0.456		mg/L		91	75 - 125	
Lead	ND		0.500	0.482		mg/L		96	75 - 125	
Lithium	0.0023	J	0.500	0.446		mg/L		89	75 - 125	
Molybdenum	0.0050		0.500	0.523		mg/L		104	75 - 125	
Selenium	ND		1.00	0.949		mg/L		95	75 - 125	
Thallium	ND		1.00	0.947		mg/L		95	75 - 125	

Lab Sample ID: 180-156881-7 MS

Matrix: Water

Analysis Batch: 438909

Prep Type: Total Recoverable Prep Batch: 436345

MS MS %Rec Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits Cobalt ND 0.500 0.457 mg/L 91 75 - 125

Lab Sample ID: 180-156881-7 MSD

Matrix: Water

Analysis Batch, 429772

Client Sample ID: WAP-4D **Prep Type: Total Recoverable**

Client Sample ID: WAP-4D

Prop Ratch: 436345

Analysis Batch: 438772									Prep Ba	itcn: 43	36345
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND		0.250	0.273		mg/L		109	75 - 125	1	20
Arsenic	0.0098		1.00	0.979		mg/L		97	75 - 125	7	20
Barium	0.30		1.00	1.38		mg/L		107	75 - 125	5	20
Beryllium	ND		0.500	0.482		mg/L		96	75 - 125	7	20
Cadmium	ND		0.500	0.498		mg/L		100	75 - 125	6	20
Calcium	52		25.0	79.4		mg/L		111	75 - 125	3	20
Chromium	ND		0.500	0.487		mg/L		97	75 - 125	7	20
Lead	ND		0.500	0.520		mg/L		104	75 - 125	7	20
Lithium	0.0023	J	0.500	0.491		mg/L		98	75 - 125	10	20
Molybdenum	0.0050		0.500	0.546		mg/L		108	75 - 125	4	20
Selenium	ND		1.00	0.964		mg/L		96	75 - 125	2	20
Thallium	ND		1.00	1.02		mg/L		102	75 - 125	7	20

Lab Sample ID: 180-156881-7 MSD

Matrix: Water

Analysis Batch: 438909

Client Sample ID: WAP-4D **Prep Type: Total Recoverable Prep Batch: 436345**

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cobalt	ND		0.500	0.496		mg/L		99	75 - 125	8	20

Lab Sample ID: MB 180-436507/1-A

Matrix: Water

Analysis Batch: 438554

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

Prep Batch: 436507

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		05/31/23 10:30	06/20/23 17:48	1
Arsenic	ND		0.0010	0.00028	mg/L		05/31/23 10:30	06/20/23 17:48	1
Barium	ND		0.010	0.0031	mg/L		05/31/23 10:30	06/20/23 17:48	1
Beryllium	ND		0.0010	0.00027	mg/L		05/31/23 10:30	06/20/23 17:48	1
Cadmium	ND		0.0010	0.00022	mg/L		05/31/23 10:30	06/20/23 17:48	1
Calcium	ND		0.50	0.13	mg/L		05/31/23 10:30	06/20/23 17:48	1

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Project/Site: CCR Groundwater Monitoring FB Culley

Method: EPA 6020A - Metals (ICP/MS) (Continued)

Matrix: Water

Analysis Batch: 438554

Lab Sample ID: MB 180-436507/1-A

Client Sample ID: Method Blank **Prep Type: Total Recoverable Prep Batch: 436507**

Job ID: 180-156881-1

SDG: Culley West

	MB N	MB							
Analyte	Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND ND		0.0020	0.0015	mg/L		05/31/23 10:30	06/20/23 17:48	1
Cobalt	ND		0.00050	0.00026	mg/L		05/31/23 10:30	06/20/23 17:48	1
Lead	ND		0.0010	0.00038	mg/L		05/31/23 10:30	06/20/23 17:48	1
Lithium	ND		0.0050	0.0013	mg/L		05/31/23 10:30	06/20/23 17:48	1
Molybdenum	ND		0.0050	0.00061	mg/L		05/31/23 10:30	06/20/23 17:48	1
Selenium	ND		0.0050	0.00074	mg/L		05/31/23 10:30	06/20/23 17:48	1
Thallium	ND		0.0010	0.00047	mg/L		05/31/23 10:30	06/20/23 17:48	1

Lab Sample ID: LCS 180-436507/2-A

Matrix: Water

Analysis Batch: 438554

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

Prep Batch: 436507

	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	0.250	0.258		mg/L		103	80 - 120
Arsenic	1.00	0.923		mg/L		92	80 - 120
Barium	1.00	1.01		mg/L		101	80 - 120
Beryllium	0.500	0.476		mg/L		95	80 - 120
Cadmium	0.500	0.488		mg/L		98	80 - 120
Calcium	25.0	26.5		mg/L		106	80 - 120
Chromium	0.500	0.493		mg/L		99	80 - 120
Cobalt	0.500	0.460		mg/L		92	80 - 120
Lead	0.500	0.498		mg/L		100	80 - 120
Lithium	0.500	0.488		mg/L		98	80 - 120
Molybdenum	0.500	0.482		mg/L		96	80 - 120
Selenium	1.00	0.997		mg/L		100	80 - 120
Thallium	1.00	0.978		mg/L		98	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-436996/1-A

Matrix: Water

Analysis Batch: 437135

Client Sample ID: Method Blank

Prep Type: Total/NA **Prep Batch: 436996**

MB MB Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Mercury ND 0.00020 0.00013 mg/L 06/05/23 12:00 06/06/23 12:34

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 180-436996/2-A **Matrix: Water**

Prep Type: Total/NA **Prep Batch: 436996**

Analysis Batch: 437135 Spike LCS LCS %Rec Added Result Qualifier Unit D %Rec

Analyte Limits Mercury 0.00250 0.00255 102 80 - 120 mg/L

Lab Sample ID: 180-156881-7 MS

Matrix: Water

Analysis Batch: 437135

Client Sample ID: WAP-4D Prep Type: Total/NA **Prep Batch: 436996**

Sample Sample Spike MS MS %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Mercury ND 0.00100 0.000962 mg/L 96 75 - 125

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6/29/2023

Spike

Added

0.00100

10

Job ID: 180-156881-1 SDG: Culley West

Method: EPA 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 180-156881-7 MSD

Matrix: Water

Analyte

Mercury

Analysis Batch: 437135

Client Sample ID: WAP-4D

Prep Type: Total/NA

Prep Batch: 436996 %Rec **RPD**

Limits RPD Limit 75 - 125 0 20

Lab Sample ID: MB 180-437479/1-A

Matrix: Water

Analysis Batch: 437591

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 437479

MB MB

Sample Sample

ND

Result Qualifier

Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Analyte 0.00020 06/09/23 10:00 06/10/23 11:30 Mercury ND 0.00013 mg/L

Lab Sample ID: LCS 180-437479/2-A **Client Sample ID: Lab Control Sample**

Matrix: Water

Analysis Batch: 437591

Prep Type: Total/NA Prep Batch: 437479

MSD MSD

0.000964

Result Qualifier

Unit

mg/L

D

%Rec

96

%Rec

Spike LCS LCS Analyte Added Limits Result Qualifier Unit %Rec Mercury 0.00250 0.00249 100 80 - 120 mg/L

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-436285/1

Matrix: Water

Analysis Batch: 436285

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits 7.00 7.1 SU 101 99 - 101

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

Lab Sample ID: MB 180-435869/1

Matrix: Water

Analysis Batch: 435869

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

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 10 mg/L **Total Dissolved Solids** ND 10 05/22/23 16:09

Lab Sample ID: LCS 180-435869/2

Matrix: Water

Analysis Batch: 435869

Spike LCS LCS %Rec Added Result Qualifier Unit %Rec Limits Total Dissolved Solids 580 598 mg/L 103 85 - 115

Lab Sample ID: MB 180-435991/1

Matrix: Water

Analysis Batch: 435991

Client Sample ID: Method Blank

Prep Type: Total/NA

MB MB

Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Total Dissolved Solids ND 10 05/23/23 20:17 10 mg/L

Job ID: 180-156881-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

SDG: Culley West

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

Lab Sample ID: LCS 180-435991/2

Matrix: Water

Analysis Batch: 435991

Prep Type: Total/NA LCS LCS %Rec

Client Sample ID: Lab Control Sample

Spike Added Result Qualifier Unit %Rec Limits Analyte D **Total Dissolved Solids** 580 572 mg/L 99 85 - 115

Client Sample ID: Method Blank Lab Sample ID: MB 180-435992/1 **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 435992

MB MB Result Qualifier RL **MDL** Unit Prepared Dil Fac Analyte Analyzed 10 10 mg/L 05/23/23 21:03 **Total Dissolved Solids** ND

Lab Sample ID: LCS 180-435992/2 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 435992

Spike LCS LCS %Rec Added Limits Analyte Result Qualifier Unit %Rec Total Dissolved Solids 580 556 96 85 - 115 mg/L

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-613645/1-A **Client Sample ID: Method Blank Matrix: Water** Prep Type: Total/NA

Analysis Batch: 61	7000								Prep Batch:	613645
			Count	Total						
	MB	MB	Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.05215	U	0.0806	0.0807	1.00	0.223	pCi/L	05/30/23 10:07	06/21/23 09:24	1
	МВ	МВ								
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.4		30 - 110					05/30/23 10:07	06/21/23 09:24	1

Lab Sample ID: LCS 160-613645/2-A **Client Sample ID: Lab Control Sample**

Matrix: Water

Prep Type: Total/NA **Analysis Batch: 617000 Prep Batch: 613645**

				iotai					
	Spike	LCS	LCS	Uncert.				%Rec	
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC Unit	%Rec	Limits	
Radium-226	11.3	9.777		1.21	1.00	0.208 pCi/L	86	75 - 125	

LCS LCS Limits Carrier %Yield Qualifier Ba Carrier 30 - 110 92 1

Lab Sample ID: MB 160-614557/1-A **Client Sample ID: Method Blank** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 618150

Prep Batch: 614557 Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 -0.01728 U 0.0814 0.0814 1.00 0.166 pCi/L 06/06/23 10:30 06/28/23 18:19

10

Project/Site: CCR Groundwater Monitoring FB Culley SDG: Culley West

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-614557/1-A

Matrix: Water

Analysis Batch: 618150

MB MB

Carrier **%Yield Qualifier** Limits Ba Carrier 94 1 30 - 110 Client Sample ID: Method Blank

Analyzed

Prep Type: Total/NA

Job ID: 180-156881-1

Prep Batch: 614557

Dil Fac

06/06/23 10:30 06/28/23 18:19

Lab Sample ID: LCS 160-614557/2-A

Matrix: Water

Analysis Batch: 618150

Client Sample ID: Lab Control Sample

Prepared

Prep Type: Total/NA Prep Batch: 614557

Total

LCS LCS %Rec **Spike** Uncert. Analyte Added Result Qual $(2\sigma + / -)$ RL**MDC** Unit %Rec Limits Radium-226 11.3 9.867 1.07 1.00 0.138 pCi/L 87 75 - 125

LCS LCS

Carrier %Yield Qualifier Limits Ba Carrier 89.3 30 - 110

Lab Sample ID: 180-156881-7 DU

Matrix: Water

Analysis Batch: 618151

Client Sample ID: WAP-4D

Prep Type: Total/NA

Prep Batch: 614557

Total

DU DU **RER** Sample Sample Uncert. Analyte Result Qual Result Qual $(2\sigma + / -)$ RL **MDC** Unit RER Limit 0.385 0.44 Radium-226 0.2587 0.129 1.00 0.158 pCi/L

DU DU

Carrier %Yield Qualifier Limits Ba Carrier 30 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-613647/1-A

Matrix: Water

Analysis Batch: 616862

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 613647

Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-228 0.4351 U 0.401 0.403 1.00 0.637 pCi/L 05/30/23 10:18 06/20/23 14:27

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 86.4 30 - 110 05/30/23 10:18 06/20/23 14:27 Y Carrier 30 - 110 05/30/23 10:18 06/20/23 14:27 80.4

Lab Sample ID: LCS 160-613647/2-A

MB MB

Matrix: Water

Analysis Batch: 616862

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 613647

				Total					
	Spike	LCS L	_CS	Uncert.				%Rec	
Analyte	Added	Result C	Qual	(2σ+/-)	RL	MDC Unit	%Rec	Limits	
Radium-228	8.10	9.283		1.30	1.00	0.493 pCi/L	115	75 - 125	

Job ID: 180-156881-1

SDG: Culley West

Prep Type: Total/NA

Prep Batch: 613647

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

Lab Sample ID: LCS 160-613647/2-A

Matrix: Water

Analysis Batch: 616862

LCS LCS

Carrier	%Yield	Qualifier	Limits
Ba Carrier	92.1		30 - 110
Y Carrier	81.1		30 - 110

Lab Sample ID: MB 160-614558/1-A **Client Sample ID: Method Blank**

Matrix: Water

Analysis Batch: 617527

Prep Type: Total/NA

Prep Batch: 614558

Count Total MB MB Uncert. Uncert. (2σ+/-) Analyte Result Qualifier $(2\sigma + / -)$ RL**MDC** Unit Prepared Analyzed Dil Fac Radium-228 0.5210 U 0.361 0.364 1.00 0.544 pCi/L 06/06/23 10:34 06/23/23 11:47

MB MB Carrier %Yield Qualifier Limits Ba Carrier 94.1 30 - 110 30 - 110 Y Carrier 84.5

Prepared Analyzed Dil Fac 06/06/23 10:34 06/23/23 11:47 06/06/23 10:34 06/23/23 11:47

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 160-614558/2-A **Client Sample ID: Lab Control Sample**

Matrix: Water

Analysis Batch: 617527

Prep Type: Total/NA

Prep Batch: 614558

Total LCS LCS %Rec Spike Uncert. Analyte Added $(2\sigma + / -)$ RL %Rec Limits Result Qual **MDC** Unit Radium-228 8.10 8.775 1.25 1.00 0.558 pCi/L 108 75 - 125

LCS LCS

Carrier	%Yield	Qualifier	Limits
Ba Carrier	89.3		30 - 110
Y Carrier	83.0		30 - 110

Lab Sample ID: 180-156881-7 DU Client Sample ID: WAP-4D

Matrix: Water

Y Carrier

Analysis Batch: 617527

Prep Type: Total/NA Prep Batch: 614558

Total Sample Sample DU DU Uncert. **RER** Analyte Result Qual Result Qual $(2\sigma + / -)$ RL **MDC** Unit RER Limit Radium-228 0.626 U 0.5119 0.347 1.00 0.510 pCi/L 0.14

DU DU %Yield Qualifier Carrier Limits Ba Carrier 95.1 30 - 110

81.9

30 - 110

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

HPLC/IC

Analysis Batch: 435928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total/NA	Water	EPA 9056A	
180-156881-2	WAP-5I	Total/NA	Water	EPA 9056A	
MB 180-435928/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-435928/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 436051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-3	WAP-5D	Total/NA	Water	EPA 9056A	
180-156881-4	WAP-8S	Total/NA	Water	EPA 9056A	
180-156881-5	WAP-8I	Total/NA	Water	EPA 9056A	
180-156881-6	WAP-8D	Total/NA	Water	EPA 9056A	
180-156881-7	WAP-4D	Total/NA	Water	EPA 9056A	
180-156881-8	WAP-4I	Total/NA	Water	EPA 9056A	
180-156881-9	DUP 1	Total/NA	Water	EPA 9056A	
MB 180-436051/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-436051/7	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-156881-7 MS	WAP-4D	Total/NA	Water	EPA 9056A	
180-156881-7 MSD	WAP-4D	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 436345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total Recoverable	Water	3005A	<u> </u>
180-156881-2	WAP-5I	Total Recoverable	Water	3005A	
180-156881-3	WAP-5D	Total Recoverable	Water	3005A	
180-156881-4	WAP-8S	Total Recoverable	Water	3005A	
180-156881-5	WAP-8I	Total Recoverable	Water	3005A	
180-156881-6	WAP-8D	Total Recoverable	Water	3005A	
180-156881-7	WAP-4D	Total Recoverable	Water	3005A	
180-156881-8	WAP-4I	Total Recoverable	Water	3005A	
MB 180-436345/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-436345/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-156881-7 MS	WAP-4D	Total Recoverable	Water	3005A	
180-156881-7 MSD	WAP-4D	Total Recoverable	Water	3005A	

Prep Batch: 436357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total Recoverable	Water	3005A	
180-156881-2	WAP-5I	Total Recoverable	Water	3005A	
180-156881-3	WAP-5D	Total Recoverable	Water	3005A	
180-156881-4	WAP-8S	Total Recoverable	Water	3005A	
180-156881-5	WAP-8I	Total Recoverable	Water	3005A	
180-156881-6	WAP-8D	Total Recoverable	Water	3005A	
180-156881-7	WAP-4D	Total Recoverable	Water	3005A	
180-156881-8	WAP-4I	Total Recoverable	Water	3005A	
MB 180-436357/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-436357/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-156881-7 MS	WAP-4D	Total Recoverable	Water	3005A	
180-156881-7 MSD	WAP-4D	Total Recoverable	Water	3005A	

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Job ID: 180-156881-1

SDG: Culley West

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Metals

Pren	Batch:	436507
IIED	Dateii.	40000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-9	DUP 1	Total Recoverable	Water	3005A	
MB 180-436507/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-436507/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 436758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-9	DUP 1	Total Recoverable	Water	3005A	
MB 180-436758/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-436758/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 436996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total/NA	Water	7470A	
180-156881-2	WAP-5I	Total/NA	Water	7470A	
180-156881-3	WAP-5D	Total/NA	Water	7470A	
180-156881-4	WAP-8S	Total/NA	Water	7470A	
180-156881-5	WAP-8I	Total/NA	Water	7470A	
180-156881-6	WAP-8D	Total/NA	Water	7470A	
180-156881-7	WAP-4D	Total/NA	Water	7470A	
180-156881-8	WAP-4I	Total/NA	Water	7470A	
MB 180-436996/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-436996/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-156881-7 MS	WAP-4D	Total/NA	Water	7470A	
180-156881-7 MSD	WAP-4D	Total/NA	Water	7470A	

Analysis Batch: 437021

Lab Sample ID 180-156881-9	Client Sample ID DUP 1	Prep Type Total Recoverable	Matrix Water	Method EPA 6010D	Prep Batch 436758
MB 180-436758/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	436758
LCS 180-436758/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	436758

Analysis Batch: 437135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total/NA	Water	EPA 7470A	436996
180-156881-2	WAP-5I	Total/NA	Water	EPA 7470A	436996
180-156881-3	WAP-5D	Total/NA	Water	EPA 7470A	436996
180-156881-4	WAP-8S	Total/NA	Water	EPA 7470A	436996
180-156881-5	WAP-8I	Total/NA	Water	EPA 7470A	436996
180-156881-6	WAP-8D	Total/NA	Water	EPA 7470A	436996
180-156881-7	WAP-4D	Total/NA	Water	EPA 7470A	436996
180-156881-8	WAP-4I	Total/NA	Water	EPA 7470A	436996
MB 180-436996/1-A	Method Blank	Total/NA	Water	EPA 7470A	436996
LCS 180-436996/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	436996
180-156881-7 MS	WAP-4D	Total/NA	Water	EPA 7470A	436996
180-156881-7 MSD	WAP-4D	Total/NA	Water	EPA 7470A	436996

Prep Batch: 437479

Lab Sample ID 180-156881-9	Client Sample ID DUP 1	Prep Type Total/NA	Matrix Water	Method 7470A	Prep Batch
MB 180-437479/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-437479/2-A	Lab Control Sample	Total/NA	Water	7470A	

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Job ID: 180-156881-1

SDG: Culley West

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9

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Metals

Analysis Batch: 437591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-9	DUP 1	Total/NA	Water	EPA 7470A	437479
MB 180-437479/1-A	Method Blank	Total/NA	Water	EPA 7470A	437479
LCS 180-437479/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	437479

Analysis Batch: 438036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total Recoverable	Water	EPA 6010D	436357
180-156881-2	WAP-5I	Total Recoverable	Water	EPA 6010D	436357
180-156881-3	WAP-5D	Total Recoverable	Water	EPA 6010D	436357
180-156881-4	WAP-8S	Total Recoverable	Water	EPA 6010D	436357
180-156881-5	WAP-8I	Total Recoverable	Water	EPA 6010D	436357
180-156881-6	WAP-8D	Total Recoverable	Water	EPA 6010D	436357
180-156881-7	WAP-4D	Total Recoverable	Water	EPA 6010D	436357
180-156881-8	WAP-4I	Total Recoverable	Water	EPA 6010D	436357
MB 180-436357/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	436357
LCS 180-436357/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	436357
180-156881-7 MS	WAP-4D	Total Recoverable	Water	EPA 6010D	436357
180-156881-7 MSD	WAP-4D	Total Recoverable	Water	EPA 6010D	436357

Analysis Batch: 438554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-9	DUP 1	Total Recoverable	Water	EPA 6020A	436507
MB 180-436507/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	436507
LCS 180-436507/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	436507

Analysis Batch: 438772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total Recoverable	Water	EPA 6020A	436345
180-156881-2	WAP-5I	Total Recoverable	Water	EPA 6020A	436345
180-156881-3	WAP-5D	Total Recoverable	Water	EPA 6020A	436345
180-156881-4	WAP-8S	Total Recoverable	Water	EPA 6020A	436345
180-156881-5	WAP-8I	Total Recoverable	Water	EPA 6020A	436345
180-156881-6	WAP-8D	Total Recoverable	Water	EPA 6020A	436345
180-156881-7	WAP-4D	Total Recoverable	Water	EPA 6020A	436345
180-156881-8	WAP-4I	Total Recoverable	Water	EPA 6020A	436345
MB 180-436345/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	436345
LCS 180-436345/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	436345
180-156881-7 MS	WAP-4D	Total Recoverable	Water	EPA 6020A	436345
180-156881-7 MSD	WAP-4D	Total Recoverable	Water	EPA 6020A	436345

Analysis Batch: 438909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total Recoverable	Water	EPA 6020A	436345
180-156881-2	WAP-5I	Total Recoverable	Water	EPA 6020A	436345
180-156881-3	WAP-5D	Total Recoverable	Water	EPA 6020A	436345
180-156881-4	WAP-8S	Total Recoverable	Water	EPA 6020A	436345
180-156881-5	WAP-8I	Total Recoverable	Water	EPA 6020A	436345
180-156881-6	WAP-8D	Total Recoverable	Water	EPA 6020A	436345
180-156881-7	WAP-4D	Total Recoverable	Water	EPA 6020A	436345
180-156881-8	WAP-4I	Total Recoverable	Water	EPA 6020A	436345
MB 180-436345/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	436345

Eurofins Pittsburgh

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Job ID: 180-156881-1

SDG: Culley West

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Metals (Continued)

Analysis Batch: 438909 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-436345/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	436345
180-156881-7 MS	WAP-4D	Total Recoverable	Water	EPA 6020A	436345
180-156881-7 MSD	WAP-4D	Total Recoverable	Water	EPA 6020A	436345

General Chemistry

Analysis Batch: 435869

Lab Sample ID 180-156881-1	Client Sample ID WAP-5S	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
180-156881-2	WAP-5I	Total/NA	Water	SM 2540C	
180-156881-3	WAP-5D	Total/NA	Water	SM 2540C	
MB 180-435869/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-435869/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 435991

Lab Sample ID 180-156881-7	Client Sample ID WAP-4D	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
MB 180-435991/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-435991/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 435992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-4	WAP-8S	Total/NA	Water	SM 2540C	
180-156881-5	WAP-8I	Total/NA	Water	SM 2540C	
180-156881-6	WAP-8D	Total/NA	Water	SM 2540C	
180-156881-8	WAP-4I	Total/NA	Water	SM 2540C	
180-156881-9	DUP 1	Total/NA	Water	SM 2540C	
MB 180-435992/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-435992/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 436285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total/NA	Water	EPA 9040C	
180-156881-2	WAP-5I	Total/NA	Water	EPA 9040C	
180-156881-3	WAP-5D	Total/NA	Water	EPA 9040C	
180-156881-4	WAP-8S	Total/NA	Water	EPA 9040C	
180-156881-5	WAP-8I	Total/NA	Water	EPA 9040C	
180-156881-6	WAP-8D	Total/NA	Water	EPA 9040C	
180-156881-7	WAP-4D	Total/NA	Water	EPA 9040C	
180-156881-8	WAP-4I	Total/NA	Water	EPA 9040C	
180-156881-9	DUP 1	Total/NA	Water	EPA 9040C	
LCS 180-436285/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 613645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-3	WAP-5D	Total/NA	Water	PrecSep-21	
180-156881-9	DUP 1	Total/NA	Water	PrecSep-21	
MB 160-613645/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-613645/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Eurofins Pittsburgh

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Job ID: 180-156881-1

SDG: Culley West

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Job ID: 180-156881-1 ster Monitoring FB Culley SDG: Culley West

Rad

Prep Batch: 613647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-3	WAP-5D	Total/NA	Water	PrecSep_0	
180-156881-9	DUP 1	Total/NA	Water	PrecSep_0	
MB 160-613647/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-613647/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 614557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total/NA	Water	PrecSep-21	
180-156881-2	WAP-5I	Total/NA	Water	PrecSep-21	
180-156881-4	WAP-8S	Total/NA	Water	PrecSep-21	
180-156881-5	WAP-8I	Total/NA	Water	PrecSep-21	
180-156881-6	WAP-8D	Total/NA	Water	PrecSep-21	
180-156881-7	WAP-4D	Total/NA	Water	PrecSep-21	
180-156881-8	WAP-4I	Total/NA	Water	PrecSep-21	
MB 160-614557/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-614557/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-156881-7 DU	WAP-4D	Total/NA	Water	PrecSep-21	

Prep Batch: 614558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156881-1	WAP-5S	Total/NA	Water	PrecSep_0	
180-156881-2	WAP-5I	Total/NA	Water	PrecSep_0	
180-156881-4	WAP-8S	Total/NA	Water	PrecSep_0	
180-156881-5	WAP-8I	Total/NA	Water	PrecSep_0	
180-156881-6	WAP-8D	Total/NA	Water	PrecSep_0	
180-156881-7	WAP-4D	Total/NA	Water	PrecSep_0	
180-156881-8	WAP-4I	Total/NA	Water	PrecSep_0	
MB 160-614558/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-614558/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-156881-7 DU	WAP-4D	Total/NA	Water	PrecSep 0	

Ver: 06/08/2021

FIIOTIC: 4 12-303-7030 FAX. 4 12-303-2400							
Client Information (Sub Contract Lab)	Sampler: -	Lab PM Hayes	Lab PM: Hayes, Ken	Carri	Carrier Tracking No(s):	COC No: 180-487721.2	Γ
Client Contact. Shipping/Receiving	Phone:	E-Mail:	E-Mail: Ken Haves@et eurofinstis com		State of Origin:	Page:	Т
Company TestAmerica Laboratories Inc			Accreditations Required (See note)	(e)		10 7 7 9 P	T
Address	Due Date Requested:					180-156881-1 Preservation Codes:	Т
13715 Rider Trail North,	6/22/2023		A	Analysis Requested	ted	5	
Earth City	TAT Requested (days):					B - NaOH O - AsNaO2	
State, Zip MO, 63045			-				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	# Od		arget	-		G - Amchlor T - TSP Dodecahydrate	
Email:	# OM		(o) T bisbi		3	I - Ice J - DI Water	
Project Name: CCR Groundwater Monitoring FB Culley	Project #: 18016014		10 29 1812 12			K - EDTA VV - pn 4-5 Y - Trizma L - EDA Z - other (specify)	
Site:	SSOW#:		CZeb CZeb		uo3 jo	Other:	
Sample Identification - Client ID (Lab ID)	Sample Date Time	Sample Matrix Type (wewster, session) (C=comp, owester) G=grab) 81-Tissue, A-Asir)	Field Filfered IIIA M/SM mnohed 9315_8428191e 9320_84288_61		19dmuM is3oT	Special Instructions/Note:	
	X	a	X				
DUP 1 (180-156881-9)	5/17/23 Eastern	Water	×			2	
10.00							
						30	T
Note: Since laboratory accreditations are subject to change. Eurofins Pittsburgh places the ownership of method, analyte & accreditation compliance upon our subcontract laboratoryes. 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/lessis/matrix sping 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 laboratory in mediately. If all requested accreditations are current to date, return the signed Chain of Custody states and compliance to Eurofins Pittsburgh.	Ingh places the ownership of method, analy atrix being analyzed, the samples must be unr the signed Chain of Custody attesting to	le & accreditation complianc shipped back to the Eurofins said compliance to Eurofin	upon our subcontract laboratori Pittsburgh laboratory or other ins	es. This sample shipm structions will be provide	ent is forwarded under chain-of-	custody. If the laboratory does not currently in status should be brought to Eurofins Pittsbury	E
Possible Hazard Identification			Sample Disposal (A	fee may be asses	sed if samples are retain	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	Т
Unconfirmed			Return To Client	t Dispo	Disposal By Lab	Archive For Months	
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		Special Instructions/QC Requirements:	C Requirements:			Т
Empty Kit Relinquished by:	Date:		Time:		Method of Shipment:		Т
Reinquished by:	Date/Time:	Company	1 1	FED EX	Date/Time:	Company	Π
	Date/Time:	Company		Wednington	gto MATY 2 6	2023 0530 Companys 12	Г
r	Date/Time:	Company	Received by:		Date/Time:	Company	Т
Custody Seals Intact: Custody Seal No.: △ Yes △ No			Cooler Temperature(s) °C and Other Remarks	°C and Other Remarks			Π
						100000000000000000000000000000000000000	٦

Environment Testing

💸 eurofins

Chain of Custody Record

Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468

Eurofins Pittsburgh 301 Alpha Drive RIDC Park

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-156881-1

SDG Number: Culley West

Login Number: 156881 List Source: Eurofins Pittsburgh

List Number: 1

Creator: Watson, Debbie

Creator. Watson, Debbie		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	

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Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-156881-1

SDG Number: Culley West

Login Number: 156881 List Source: Eurofins St. Louis
List Number: 2 List Creation: 05/26/23 03:34 PM

Creator: Worthington, Sierra M

Creator: Worthington, Sierra M		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	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?	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	

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Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-156881-1

SDG Number: Culley West

List Source: Eurofins St. Louis
List Number: 3
List Creation: 06/01/23 12:44 PM

Creator: Sharkey-Gonzalez, Briana L

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	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?	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	

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/27/2023 10:19:34 AM

JOB DESCRIPTION

CCR Groundwater Monitoring SDG NUMBER Culley West

JOB NUMBER

180-156913-1

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh PA 15238



Eurofins Pittsburgh

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 6/27/2023 10:19:34 AM

Authorized for release by Ken Hayes, Project Manager II Ken.Hayes@et.eurofinsus.com (615)301-5035

Kuth Haye

8

10

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

Laboratory Job ID: 180-156913-1 SDG: Culley West

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1

SDG: Culley West

Job ID: 180-156913-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative 180-156913-1

Receipt

The samples were received on 5/20/2023 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 3 coolers at receipt time were 1.3°C, 1.9°C and 2.9°C

Gas Flow Proportional Counter

Method 9315_Ra226: Radium-226 batch 613843Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.WAP-9S (180-156913-1), WAP-9I (180-156913-2), WAP-9D (180-156913-3), WAP-6S (180-156913-4), WAP-6I (180-156913-5), WAP-6D (180-156913-6), WAP-1 (180-156913-7), WAP-4S (180-156913-8), WAP-3S (180-156913-9), WAP-3D (180-156913-10), DUP 2 (180-156913-11), (LCS 160-613843/2-A), (MB 160-613843/1-A), (480-209057-D-4-A), (480-209057-D-4-B MS) and (480-209057-C-4-A MSD)

Method 9320 Ra228: Radium-228 batch 613845The detection goal was not met for the following sample(s). Sample was prepped at a reduced volume due to the presence of matrix interferences: WAP-9D (180-156913-3). Analytical results are reported with the detection limit achieved.

Method 9320 Ra228: Radium-228 batch 613845Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.WAP-9S (180-156913-1), WAP-9I (180-156913-2), WAP-9D (180-156913-3), WAP-6S (180-156913-4), WAP-6I (180-156913-5), WAP-6D (180-156913-6), WAP-1 (180-156913-7), WAP-4S (180-156913-8), WAP-3S (180-156913-9), WAP-3D (180-156913-10), DUP 2 (180-156913-11), (LCS 160-613845/2-A), (MB 160-613845/1-A), (480-209057-D-4-C), (480-209057-D-4-D MS) and (480-209057-C-4-B MSD)

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

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

Narrative

Job Narrative 180-156913-2

Receipt

The samples were received on 5/20/2023 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 3 coolers at receipt time were 1.3°C, 1.9°C and 2.9°C

HPLC/IC

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

Metals

Method 6020A: The post digestion spike % recovery for calcium associated with batch 180-438909 was outside of control limits. The associated samples are: WAP-9S (180-156913-1), WAP-9I (180-156913-2), WAP-9D (180-156913-3), WAP-6S (180-156913-4), WAP-6I (180-156913-5), WAP-6D (180-156913-6), WAP-1 (180-156913-7), WAP-4S (180-156913-8), WAP-3S (180-156913-9), WAP-3D (180-156913-10), DUP 2 (180-156913-11), (180-156913-E-7-E MS), (180-156913-E-7-F MSD), (180-156913-E-7-D PDS) and (180-156913-E-7-D SD ^5).

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

General Chemistry

Case Narrative

Client: Haley & Aldrich, Inc.

Job ID: 180-156913-1 Project/Site: CCR Groundwater Monitoring SDG: Culley West

Job ID: 180-156913-1 (Continued)

Laboratory: Eurofins Pittsburgh (Continued)

Method 2540C_Calcd: Sample did not reach a stable weight after 4 cycles of heating, cooling, and desiccating. Sample cycle 3 residue mass was used to calculate the Total Dissolved Solids (TDS). DUP 2 (180-156913-11)

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.

Job ID: 180-156913-1 Project/Site: CCR Groundwater Monitoring SDG: Culley West

Qualifiers

Metals	
Qualifier	•

MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore	e, control limits are not

applicable. Compound was found in the blank and sample.

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 Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Rad

В

Qualifier **Qualifier Description**

G The Sample MDC is greater than the requested RL.

U Result is less than the sample detection limit.

Qualifier Description

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)

MCI EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) Minimum Detectable Concentration (Radiochemistry) MDC

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)

Reporting Limit or Requested Limit (Radiochemistry) RL

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) **TEQ**

TNTC Too Numerous To Count

Eurofins Pittsburgh

Page 6 of 45 6/27/2023

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: 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	06-25-23
California	State	2891	04-30-24
Connecticut	State	PH-0688	06-25-23
Florida	NELAP	E871008	06-25-23
Georgia	State	PA 02-00416	06-25-23
Illinois	NELAP	004375	06-30-24
Kansas	NELAP	E-10350	06-25-23
Kentucky (UST)	State	162013	04-30-23 *
Kentucky (WW)	State	KY98043	06-25-23
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-25-23
Maine	State	PA00164	03-06-24
Minnesota	NELAP	042-999-482	06-25-23
New Hampshire	NELAP	2030	06-25-23
New Jersey	NELAP	PA005	06-25-23
New York	NELAP	11182	06-25-23
North Carolina (WW/SW)	State	434	12-31-23
North Dakota	State	R-227	04-30-24
Oregon	NELAP	PA-2151	02-06-24
Pennsylvania	NELAP	02-00416	06-25-23
Rhode Island	State	LAO00362	12-31-22 *
South Carolina	State	89014	04-30-23 *
Texas	NELAP	T104704528	06-25-23
US Fish & Wildlife	US Federal Programs	058448	03-31-24
USDA	US Federal Programs	P330-16-00211	06-21-24
Utah	NELAP	PA001462019-8	05-31-24
Virginia	NELAP	10043	06-25-23
West Virginia DEP	State	142	06-25-23
Wisconsin	State	998027800	08-31-23

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	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
lowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23

 $^{^{\}star} \ \text{Accreditation/Certification renewal pending - accreditation/certification considered valid}.$

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: 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
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-24
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-23

Sample Summary

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

Job ID: 180-156913-1 SI

DG: Culley West	

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-156913-1	WAP-9S	Water	05/19/23 11:30	05/20/23 09:30
180-156913-2	WAP-9I	Water	05/19/23 12:40	05/20/23 09:30
180-156913-3	WAP-9D	Water	05/19/23 14:40	05/20/23 09:30
180-156913-4	WAP-6S	Water	05/19/23 14:30	05/20/23 09:30
180-156913-5	WAP-6I	Water	05/18/23 15:40	05/20/23 09:30
180-156913-6	WAP-6D	Water	05/18/23 16:30	05/20/23 09:30
180-156913-7	WAP-1	Water	05/18/23 17:50	05/20/23 09:30
180-156913-8	WAP-4S	Water	05/18/23 13:15	05/20/23 09:30
180-156913-9	WAP-3S	Water	05/19/23 17:30	05/20/23 09:30
180-156913-10	WAP-3D	Water	05/19/23 16:40	05/20/23 09:30
180-156913-11	DUP 2	Water	05/19/23 00:00	05/20/23 09:30

Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1

SDG: Culley West

Method 9315	Method Description Radium-226 (GFPC)	Protocol SW846	Laboratory 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: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

SDG: Culley West

Lab Sample ID: 180-156913-1

Matrix: Water

Job ID: 180-156913-1

Client Sample ID: WAP-9S Date Collected: 05/19/23 11:30 Date Received: 05/20/23 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	435949	05/23/23 13:44	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6010D it ID: Q		1	50 mL	50 mL	437189 438432	06/07/23 06:53 06/19/23 17:16		EET PIT EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A It ID: NEMO		1	50 mL	50 mL	437190 438909	06/07/23 07:02 06/23/23 17:34		EET PIT EET PIT
Total/NA Total/NA	Prep Analysis Instrumer	7470A EPA 7470A tt ID: HGZ		1	25 mL	25 mL	437669 437829	06/12/23 11:30 06/13/23 14:25		EET PIT EET PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: OZ		1			436603	05/27/23 15:32	BAB	EET PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	436229	05/25/23 13:53	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep-21 9315 tt ID: GFPCRED		1	992.34 mL	1.0 g	613843 617526	05/31/23 09:27 06/23/23 09:16		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep_0 9320 tt ID: GFPCORANG	Έ	1	992.34 mL	1.0 g	613845 617160	05/31/23 09:30 06/21/23 14:29		EET SL EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			617547	06/23/23 16:54	SCB	EET SL

Client Sample ID: WAP-9I

Date Collected: 05/19/23 12:40

Lab Sample ID: 180-156913-2

Matrix: Water

Date Received: 05/20/23 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	435949	05/23/23 14:40	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437189	06/07/23 06:53	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6010D t ID: Q		1			438432	06/19/23 17:22	AAS	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437190	06/07/23 07:02	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			438909	06/23/23 17:37	KED	EET PIT
Total/NA	Prep	7470A			25 mL	25 mL	437669	06/12/23 11:30	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			437829	06/13/23 14:26	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436603	05/27/23 15:38	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	436229	05/25/23 13:53	LWM	EET PIT

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: Culley West

Lab Sample ID: 180-156913-2

Matrix: Water

Client Sample ID: WAP-9I Date Collected: 05/19/23 12:40 Date Received: 05/20/23 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			997.95 mL	1.0 g	613843	05/31/23 09:27	KAC	EET SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			617526	06/23/23 09:16	FLC	EET SL
Total/NA	Prep	PrecSep_0			997.95 mL	1.0 g	613845	05/31/23 09:30	KAC	EET SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCORANGE	Ē	1			617160	06/21/23 14:29	FLC	EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			617547	06/23/23 16:54	SCB	EET SL

Lab Sample ID: 180-156913-3 **Client Sample ID: WAP-9D** Date Collected: 05/19/23 14:40

Matrix: Water

Date Received: 05/20/23 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	435949	05/23/23 14:58	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437189	06/07/23 06:53	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6010D t ID: Q		1			438432	06/19/23 17:37	AAS	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437190	06/07/23 07:02	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			438909	06/23/23 17:40	KED	EET PIT
Total/NA	Prep	7470A			25 mL	25 mL	437669	06/12/23 11:30	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			437829	06/13/23 14:27	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436603	05/27/23 15:41	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	436229	05/25/23 13:53	LWM	EET PIT
Total/NA	Prep	PrecSep-21			757.03 mL	1.0 g	613843	05/31/23 09:27	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			617526	06/23/23 09:18	FLC	EET SL
Total/NA	Prep	PrecSep_0			757.03 mL	1.0 g	613845	05/31/23 09:30	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCORANG	E	1		_	617160	06/21/23 14:30	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			617547	06/23/23 16:54	SCB	EET SL

Client Sample ID: WAP-6S Lab Sample ID: 180-156913-4 Date Collected: 05/19/23 14:30 **Matrix: Water**

Date Received: 05/20/23 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	435949	05/23/23 15:17	M1D	EET PIT
	Instrumer	nt ID: INTEGRION								

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Client: Haley & Aldrich, Inc.

Client Sample ID: WAP-6S

Project/Site: CCR Groundwater Monitoring

SDG: Culley West

Lab Sample ID: 180-156913-4

Matrix: Water

Job ID: 180-156913-1

Date Collected: 05/19/23 14:30 Date Received: 05/20/23 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	437189	06/07/23 06:53	S1Z	EET PIT
Total Recoverable	Analysis Instrumer	EPA 6010D at ID: Q		1			438432	06/19/23 17:42	AAS	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437190	06/07/23 07:02	S1Z	EET PIT
Total Recoverable	Analysis Instrumer	EPA 6020A at ID: NEMO		1			438909	06/23/23 17:43	KED	EET PIT
Total/NA	Prep	7470A			25 mL	25 mL	437669	06/12/23 11:30	MTW	EET PIT
Total/NA	Analysis Instrumer	EPA 7470A at ID: HGZ		1			437829	06/13/23 14:31	MTW	EET PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: OZ		1			436603	05/27/23 15:44	BAB	EET PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	436229	05/25/23 13:53	LWM	EET PIT
Total/NA	Prep	PrecSep-21			743.38 mL	1.0 g	613843	05/31/23 09:27	KAC	EET SL
Total/NA	Analysis Instrumer	9315 at ID: GFPCRED		1		-	617526	06/23/23 09:19	FLC	EET SL
Total/NA	Prep	PrecSep_0			743.38 mL	1.0 g	613845	05/31/23 09:30	KAC	EET SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCORANGE		1			617160	06/21/23 14:30	FLC	EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			617547	06/23/23 16:54	SCB	EET SL

Client Sample ID: WAP-6I Lab Sample ID: 180-156913-5 Date Collected: 05/18/23 15:40 **Matrix: Water**

Date Received: 05/20/23 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 Instrumen	EPA 9056A t ID: CHIC2100A		1	1 mL	1 mL	435927	05/23/23 15:13	SNL	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6010D t ID: Q		1	50 mL	50 mL	437189 438432	06/07/23 06:53 06/19/23 17:47		EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: NEMO		1	50 mL	50 mL	437190 438909	06/07/23 07:02 06/23/23 17:46		EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGZ		1	25 mL	25 mL	437524 437591	06/09/23 12:15 06/10/23 12:34		EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436603	05/27/23 15:46	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	435992	05/23/23 21:03	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCRED		1	992.79 mL	1.0 g	613843 617526	05/31/23 09:27 06/23/23 09:19		EET SL EET SL

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: Culley West

Lab Sample ID: 180-156913-5

Matrix: Water

Date Collected: 05/18/23 15:40 Date Received: 05/20/23 09:30

Client Sample ID: WAP-6I

Batch		Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep_0			992.79 mL	1.0 g	613845	05/31/23 09:30	KAC	EET SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCORANG	SE.	1			617160	06/21/23 14:30	FLC	EET SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			617547	06/23/23 16:54	SCB	EET SL

Lab Sample ID: 180-156913-6 **Client Sample ID: WAP-6D**

Date Collected: 05/18/23 16:30 **Matrix: Water** Date Received: 05/20/23 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: CHIC2100A		1	1 mL	1 mL	435927	05/23/23 15:28	SNL	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437189	06/07/23 06:53	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6010D t ID: Q		1			438432	06/19/23 17:52	AAS	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437190	06/07/23 07:02	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			438909	06/23/23 17:48	KED	EET PIT
Total/NA	Prep	7470A			25 mL	25 mL	437524	06/09/23 12:15	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			437591	06/10/23 12:35	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436603	05/27/23 15:49	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	435992	05/23/23 21:03	LWM	EET PIT
Total/NA	Prep	PrecSep-21			997.06 mL	1.0 g	613843	05/31/23 09:27	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			617526	06/23/23 09:19	FLC	EET SL
Total/NA	Prep	PrecSep_0			997.06 mL	1.0 g	613845	05/31/23 09:30	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCORANGI	≣	1			617160	06/21/23 14:30	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228		1			617547	06/23/23 16:54	SCB	EET SL

Client Sample ID: WAP-1 Lab Sample ID: 180-156913-7 Date Collected: 05/18/23 17:50 **Matrix: Water**

Date Received: 05/20/23 09:30

	Batch Type	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 9056A at ID: CHIC2100A		1	1 mL	1 mL	435927	05/23/23 16:12	SNL	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437189	06/07/23 06:53	S1Z	EET PIT
Total Recoverable	Analysis Instrumer	EPA 6010D at ID: Q		1			438432	06/19/23 17:58	AAS	EET PIT

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: Culley West

Lab Sample ID: 180-156913-7

Matrix: Water

Date	Collected:	05/18/23	17:50
Date	Received:	05/20/23	09:30

Client Sample ID: WAP-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	437190	06/07/23 07:02	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			438909	06/23/23 17:51	KED	EET PIT
Total/NA	Prep	7470A			25 mL	25 mL	437524	06/09/23 12:15	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			437591	06/10/23 12:36	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436603	05/27/23 15:52	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	435992	05/23/23 21:03	LWM	EET PIT
Total/NA	Prep	PrecSep-21			743.40 mL	1.0 g	613843	05/31/23 09:27	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			617526	06/23/23 09:19	FLC	EET SL
Total/NA	Prep	PrecSep_0			743.40 mL	1.0 g	613845	05/31/23 09:30	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCORANGE	Ē	1			617160	06/21/23 14:30	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			617547	06/23/23 16:54	SCB	EET SL

Client Sample ID: WAP-4S

Date Collected: 05/18/23 13:15 Date Received: 05/20/23 09:30

: WAP-4S Lab Sample ID: 180-156913-8 8/23 13:15 Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: CHIC2100A		1	1 mL	1 mL	435927	05/23/23 16:27	SNL	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437189	06/07/23 06:53	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6010D t ID: Q		1			438432	06/19/23 18:23	AAS	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437190	06/07/23 07:02	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			438909	06/23/23 18:11	KED	EET PIT
Total/NA	Prep	7470A			25 mL	25 mL	437524	06/09/23 12:15	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			437591	06/10/23 12:37	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436603	05/27/23 15:55	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	435992	05/23/23 21:03	LWM	EET PIT
Total/NA	Prep	PrecSep-21			991.83 mL	1.0 g	613843	05/31/23 09:27	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1		-	617526	06/23/23 09:20	FLC	EET SL
Total/NA	Prep	PrecSep_0			991.83 mL	1.0 g	613845	05/31/23 09:30	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCORANG	iΕ	1		-	617160	06/21/23 14:30	FLC	EET SL

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Client: Haley & Aldrich, Inc.

Client Sample ID: WAP-4S

Date Collected: 05/18/23 13:15

Date Received: 05/20/23 09:30

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: Culley West

Lab Sample ID: 180-156913-8

Matrix: Water

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Method **Factor** Number or Analyzed Type Run **Amount Amount** Analyst Lab Total/NA Analysis Ra226_Ra228 617547 06/23/23 16:54 SCB EET SL

Client Sample ID: WAP-3S Lab Sample ID: 180-156913-9 Date Collected: 05/19/23 17:30 **Matrix: Water**

Date Received: 05/20/23 09:30

Date Received: 05/20/23 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	435949	05/23/23 15:35	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437189	06/07/23 06:53	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6010D t ID: Q		1			438432	06/19/23 18:39	AAS	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437190	06/07/23 07:02	S1Z	EET PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			438909	06/23/23 18:14	KED	EET PIT
Total/NA	Prep	7470A			25 mL	25 mL	437669	06/12/23 11:30	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGZ		1			437829	06/13/23 14:32	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436603	05/27/23 15:57	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	436229	05/25/23 13:53	LWM	EET PIT
Total/NA	Prep	PrecSep-21			1003.77 mL	1.0 g	613843	05/31/23 09:27	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			617526	06/23/23 09:24	FLC	EET SL
Total/NA	Prep	PrecSep_0			1003.77 mL	1.0 g	613845	05/31/23 09:30	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCORANG	E	1			617160	06/21/23 14:30	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			617547	06/23/23 16:54	SCB	EET SL

Lab Sample ID: 180-156913-10 **Client Sample ID: WAP-3D** Date Collected: 05/19/23 16:40 **Matrix: Water**

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumer	EPA 9056A at ID: INTEGRION		1	1 mL	1 mL	435949	05/23/23 15:53	M1D	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437189	06/07/23 06:53	S1Z	EET PIT
Total Recoverable	Analysis Instrumer	EPA 6010D at ID: Q		1			438432	06/19/23 18:44	AAS	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	437190	06/07/23 07:02	S1Z	EET PIT
Total Recoverable	Analysis Instrumer	EPA 6020A at ID: NEMO		1			438909	06/23/23 18:17	KED	EET PIT

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6/27/2023

Client: Haley & Aldrich, Inc.

Client Sample ID: WAP-3D

Date Collected: 05/19/23 16:40

Date Received: 05/20/23 09:30

Project/Site: CCR Groundwater Monitoring

SDG: Culley West

Job ID: 180-156913-1

Lab Sample ID: 180-156913-10

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			25 mL	25 mL	437669	06/12/23 11:30	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGZ		1			437829	06/13/23 14:33	MTW	EET PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: OZ		1			436603	05/27/23 16:06	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	436229	05/25/23 13:53	LWM	EET PIT
Total/NA	Prep	PrecSep-21			994.95 mL	1.0 g	613843	05/31/23 09:27	KAC	EET SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCRED		1			617526	06/23/23 09:24	FLC	EET SL
Total/NA	Prep	PrecSep_0			994.95 mL	1.0 g	613845	05/31/23 09:30	KAC	EET SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCORANGE	Ē	1			617160	06/21/23 14:30	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 it ID: NOEQUIP		1			617547	06/23/23 16:54	SCB	EET SL

Client Sample ID: DUP 2 Lab Sample ID: 180-156913-11

Date Collected: 05/19/23 00:00 Matrix: Water Date Received: 05/20/23 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 Instrumen	EPA 9056A t ID: INTEGRION		1	1 mL	1 mL	435949	05/23/23 16:49	M1D	EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6010D t ID: Q		1	50 mL	50 mL	437189 438432	06/07/23 06:53 06/19/23 18:49		EET PIT EET PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: NEMO		1	50 mL	50 mL	437190 438909	06/07/23 07:02 06/23/23 18:20		EET PIT EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGZ		1	25 mL	25 mL	437669 437829	06/12/23 11:30 06/13/23 14:34		EET PIT EET PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436603	05/27/23 16:11	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	436229	05/25/23 13:53	LWM	EET PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCRED		1	1000.33 mL	1.0 g	613843 617526	05/31/23 09:27 06/23/23 09:25		EET SL EET SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCORANG	E	1	1000.33 mL	1.0 g	613845 617160	05/31/23 09:30 06/21/23 14:31		EET SL EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			617547	06/23/23 16:54	SCB	EET SL

6/27/2023

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12

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: Culley West

Laboratory References:

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

Analyst References:

Lab: EET PIT

Batch Type: Prep

MTW = Michael Wesoloski

S1Z = Sage Ziviello

Batch Type: Analysis

AAS = Arianna Swick

BAB = Brooke Batyi

KED = Katie Dacko

LWM = Leslie McIntire

M1D = Maureen Donlin

MTW = Michael Wesoloski

SNL = Sean Lordo

Lab: EET SL

Batch Type: Prep

KAC = Kevin Cox

Batch Type: Analysis

FLC = Fernando Cruz

SCB = Sarah Bernsen

Analyte

Carrier

Ba Carrier

Radium-228

Client Sample ID: WAP-9S

Date Collected: 05/19/23 11:30

Date Received: 05/20/23 09:30

Job ID: 180-156913-1 SDG: Culley West

Lab Sample ID: 180-156913-1

Matrix: Water

Property Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F	
Method: SW846 EPA 6010D - Metals (ICP) - Total Recoverable Result Qualifier RL MDL Unit De Prepared (Moley 23 17:16 (Moley 24 17:16 (Moley 2	Chloride		25		1.0		-			05/23/23 13:44	
Method: SW846 EPA 6010D - Metals (ICP) - Total Recoverable Result Qualifier RL MDL Unit	Fluoride		0.34		0.10	0.026	mg/L			05/23/23 13:44	
Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dill	Sulfate		64		1.0	0.76	mg/L			05/23/23 13:44	
Method: SW846 EPA 6020A - Metals (ICP/MS) - Total Recoverable Result Qualifier RL MDL Unit D Prepared Analyzed Dill Dill D Prepared Analyzed Dill Dill D D D D D D D D D	Method: SW846 EPA 6	010D -	Metals (ICP)) - Total R	ecoverable						
Method: SW846 EPA 6020A - Metals (ICP/MS) - Total Recoverable Result Qualifier RL MDL Unit D Prepared Analyzed O6/07/23 07:02 O6/23/23 17:34 O6/07/23 07:02 O6/23/23 07:0	Analyte		Result	Qualifier	RL			D	Prepared	Analyzed	Dil F
Analyte	Boron		1000	В	200	13	ug/L		06/07/23 06:53	06/19/23 17:16	
Antimony Antimony Arsenic 0.00088 J 0.0010 0.00028 mg/L 06/07/23 07:02 06/23/23 17:34 Arsenic 0.0088 0.010 0.00031 mg/L 06/07/23 07:02 06/23/23 17:34 Beryllium ND 0.0010 0.00027 mg/L 06/07/23 07:02 06/23/23 17:34 Beryllium ND 0.0010 0.00027 mg/L 06/07/23 07:02 06/23/23 17:34 Cadmium ND 0.0010 0.00022 mg/L 06/07/23 07:02 06/23/23 17:34 Cadicium 75 0.50 0.13 mg/L 06/07/23 07:02 06/23/23 17:34 Calcium ND 0.0020 0.0015 mg/L 06/07/23 07:02 06/23/23 17:34 Calcium ND 0.0020 0.0015 mg/L 06/07/23 07:02 06/23/23 17:34 Cobalt 0.00046 J 0.00050 0.0016 mg/L 06/07/23 07:02 06/23/23 17:34 Cobalt 0.00046 J 0.00050 0.0016 mg/L 06/07/23 07:02 06/23/23 17:34 Lead ND 0.0010 0.00038 mg/L 06/07/23 07:02 06/23/23 17:34 Lead ND 0.0010 0.00038 mg/L 06/07/23 07:02 06/23/23 17:34 Molybdenum 0.011 0.0050 0.00013 mg/L 06/07/23 07:02 06/23/23 17:34 Molybdenum ND 0.0050 0.00014 mg/L 06/07/23 07:02 06/23/23 17:34 Molybdenum ND 0.0050 0.00014 mg/L 06/07/23 07:02 06/23/23 17:34 Method: SW846 EPA 7470A - Mercury (CVAA) Analyte Result Qualifier RL MDL Unit D Prepared Malyzed Dill Total Dissolved Solids (SM 2540C) 7.8 HF 0.1 0.1 0.1 SU Prepared Analyzed Dill Corert. Count Total Uncert. Uncert. Uncert. Uncert. Uncert. Uncert. Analyte Result Qualifier RL MDC Unit Prepared Analyzed Dill Corert. Uncert. Uncert. Uncert. Uncert. Uncert. Uncert. Uncert. Analyte Result Qualifier RL MDC Unit Prepared Analyzed Dill Corert. Uncert. Analyte Result Qualifier Limits Prepared Analyzed Dill Cori/23 07:02 06/23/23 09:16 Carrier % Yield Qualifier Limits Prepared Analyzed Dill Cori/23 07:02 06/23/23 09:16	Method: SW846 EPA 6	020A -	Metals (ICP	MS) - Tota	al Recovera	ble					
Arsenic 0.00088	Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
Barium	Antimony		ND		0.0020	0.00097	mg/L		06/07/23 07:02	06/23/23 17:34	
Beryllium	Arsenic		0.00088	J	0.0010	0.00028	mg/L		06/07/23 07:02	06/23/23 17:34	
Cadmium	Barium		0.088		0.010	0.0031	mg/L		06/07/23 07:02	06/23/23 17:34	
Calcium 75	Beryllium		ND		0.0010	0.00027	mg/L		06/07/23 07:02	06/23/23 17:34	
Chromium	Cadmium		ND		0.0010	0.00022	mg/L		06/07/23 07:02	06/23/23 17:34	
Cobalt	Calcium		75		0.50		•		06/07/23 07:02	06/23/23 17:34	
Lead	Chromium		ND		0.0020	0.0015	mg/L		06/07/23 07:02	06/23/23 17:34	
Carrier Chemistry Continue	Cobalt		0.00046	J	0.00050	0.00026	mg/L		06/07/23 07:02	06/23/23 17:34	
Molybdenum	₋ead		ND		0.0010	0.00038	mg/L		06/07/23 07:02	06/23/23 17:34	
ND 0.0050 0.00074 mg/L 06/07/23 07:02 06/23/23 17:34	_ithium		0.0080		0.0050	0.0013	mg/L		06/07/23 07:02	06/23/23 17:34	
Method: SW846 EPA 7470A - Mercury (CVAA) Result Qualifier RL MDL Unit D Prepared Mercury Modernous Moder	Molybdenum		0.11		0.0050	0.00061	mg/L		06/07/23 07:02	06/23/23 17:34	
Method: SW846 EPA 7470A - Mercury (CVAA) Analyte Result Qualifier RL MDL Unit D Prepared Mercury MD Molecury MOL Molecury MOL Molecury MOL Molecury MOL Molecury Molecury MOL Molecury Molecury MOL Molecury Molecury MOL Molecury Selenium		ND		0.0050	0.00074	mg/L		06/07/23 07:02	06/23/23 17:34		
Result Qualifier RL MDL Unit D Prepared Analyzed Dil I	Γhallium		ND		0.0010	0.00047	mg/L		06/07/23 07:02	06/23/23 17:34	
Mercury ND 0.00020 0.00013 mg/L 06/12/23 11:30 06/13/23 14:25	Method: SW846 EPA 7	470A -	Mercury (C)	/AA)							
Result Qualifier RL MDL Unit D Prepared Analyzed Dil I	Analyte		Result	Qualifier	RL_			_ D	Prepared	Analyzed	Dil F
Result Qualifier RL MDL Unit D Prepared Analyzed Dil I	Mercury		ND		0.00020	0.00013	mg/L		06/12/23 11:30	06/13/23 14:25	
Total Dissolved Solids (SM 2540C) 350	General Chemistry										
Analyte Result Qualifier RL RL Unit D Prepared Analyzed Dil I SW846 EPA 9040C) 7.8 HF 0.1 0.1 SU 05/27/23 15:32 Method: SW846 9315 - Radium-226 (GFPC) Count Total Uncert. Uncert. Analyte Result Qualifier (2σ+/-) (2σ+/-) RL MDC Unit Prepared Analyzed Dil I Radium-226 -0.00142 U 0.134 0.134 1.00 0.263 pCi/L 05/31/23 09:27 06/23/23 09:16 Carrier %Yield Qualifier Limits Prepared Analyzed Dil I	Analyte		Result	Qualifier	RL			_ D	Prepared		Dil I
OH (SW846 EPA 9040C) 7.8 HF 0.1 0.1 SU 05/27/23 15:32 Method: SW846 9315 - Radium-226 (GFPC) Count Total Uncert. Uncert. Uncert. Uncert. Analyte Result Result Outling	Total Dissolved Solids (SM	2540C) 350		10	10	mg/L			05/25/23 13:53	
Method: SW846 9315 - Radium-226 (GFPC) Count Total Uncert. Uncert. Analyte Result Qualifier (2σ+/-) (2σ+/-) RL MDC Unit Prepared Analyzed Dil I Radium-226 -0.00142 U 0.134 0.134 1.00 0.263 pCi/L 05/31/23 09:27 06/23/23 09:16 Carrier %Yield Qualifier Limits Prepared Analyzed Dil I	Analyte		Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil F
Count Uncert. Total Uncert. Analyte Result -0.00142 Qualifier U 0.134 (2σ+/-) (2σ+/-) RL MDC 0.263 MDC Described Properties Unit Prepared Dil I Described Properties Prepared Properties Analyzed Dil I Described Properties Carrier %Yield Qualifier Limits Prepared Analyzed Dil I Described Properties Prepared Dil I Described Properties	OH (SW846 EPA 9040C)		7.8	HF	0.1	0.1	SU		- <u></u> -	05/27/23 15:32	
Count Uncert. Total Uncert. Analyte Result -0.00142 Qualifier U 0.134 (2σ+/-) (2σ+/-) RL MDC 0.263 MDC Described Properties Unit Prepared Dil I Described Properties Prepared Properties Analyzed Dil I Described Properties Carrier %Yield Qualifier Limits Prepared Analyzed Dil I Described Properties Prepared Dil I Described Properties	Method: SW846 9315 -	Radiu	m-226 (GFP	C)							
Analyte Result -0.00142 Qualifier Qualifier (2σ+/-) (2σ+/-) 0.134 RL number of the properties of the				•	Total						
Analyte Result -0.00142 Qualifier U (2σ+/-) RL 0.134 MDC Unit D Prepared Diffusion Analyzed Diffusion Diffusion Carrier %Yield Qualifier Limits Prepared Analyzed Diffusion Diffusion				Uncert.	Uncert.						
Radium-226 -0.00142 U 0.134 0.134 1.00 0.263 pCi/L 05/31/23 09:27 06/23/23 09:16 Carrier %Yield Qualifier Limits Prepared Analyzed Dil	Analyte	Result	Qualifier			RL I	MDC Unit		Prepared	Analyzed	Dil
				<u> </u>							
Ba Carrier 89.5 30 - 110 05/31/23 09:27 06/23/23 09:16	Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil
				30 - 110						06/23/23 09:16	
	Mothod: CM/DAE 0200										
Method: SW846 9320 - Radium-228 (GFPC) Count Total	Method: SW846 9320 -	Radiu	m-228 (GFP		Total						

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Analyzed

Analyzed

05/31/23 09:30 06/21/23 14:29

05/31/23 09:30 06/21/23 14:29

MDC Unit

0.601 pCi/L

RL

1.00

Prepared

Prepared

Uncert.

 $(2\sigma + / -)$

0.365

Uncert.

 $(2\sigma + / -)$

0.364

Limits

30 - 110

Result Qualifier

%Yield Qualifier

0.302 U

89.5

Dil Fac

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-9S Date Collected: 05/19/23 11:30

Lab Sample ID: 180-156913-1

06/07/23 06:53 06/19/23 17:22

Matrix: Water

Date Received: 05/20/23 09:30

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

%Yield Qualifier Limits Prepared Analyzed Dil Fac Y Carrier 77.8 30 - 110 05/31/23 09:30 06/21/23 14:29

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

Count	Total
Uncert.	Uncert.

Analyte Result Qualifier RL**MDC** Unit Prepared Dil Fac $(2\sigma + / -)$ $(2\sigma + / -)$ Analyzed Combined Radium 226 0.301 U 0.388 0.389 5.00 0.601 pCi/L 06/23/23 16:54

Boron

Client Sample ID: WAP-9I

Date Received: 05/20/23 09:30

Lab Sample ID: 180-156913-2 Date Collected: 05/19/23 12:40 **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			05/23/23 14:40	1
Fluoride	0.12		0.10	0.026	mg/L			05/23/23 14:40	1
Sulfate	39		1.0	0.76	mg/L			05/23/23 14:40	1

13 ug/L

Method: SW846 EPA 6010D - Metals (ICP) - Total Recoverable Analyte Result Qualifier MDL Unit Prepared Analyzed 200

87 JB

Analyte	Result	Qualifier	RL MDL	. Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.00	20 0.00097	mg/L		06/07/23 07:02	06/23/23 17:37	1
Arsenic	0.0052	0.00	10 0.00028	3 mg/L		06/07/23 07:02	06/23/23 17:37	1
Barium	0.085	0.0	10 0.0031	mg/L		06/07/23 07:02	06/23/23 17:37	1
Beryllium	ND	0.00	10 0.00027	mg/L		06/07/23 07:02	06/23/23 17:37	1
Cadmium	ND	0.00	10 0.00022	2 mg/L		06/07/23 07:02	06/23/23 17:37	1
Calcium	36	0	50 0.13	B mg/L		06/07/23 07:02	06/23/23 17:37	1
Chromium	ND	0.00	20 0.0015	mg/L		06/07/23 07:02	06/23/23 17:37	1
Cobalt	ND	0.000	50 0.00026	3 mg/L		06/07/23 07:02	06/23/23 17:37	1
Lead	ND	0.00	10 0.00038	B mg/L		06/07/23 07:02	06/23/23 17:37	1
Lithium	0.0037	J 0.00	50 0.0013	B mg/L		06/07/23 07:02	06/23/23 17:37	1
Molybdenum	0.0099	0.00	50 0.00061	mg/L		06/07/23 07:02	06/23/23 17:37	1
Selenium	ND	0.00	50 0.00074	l mg/L		06/07/23 07:02	06/23/23 17:37	1
Thallium	ND	0.00	10 0.00047	mg/L		06/07/23 07:02	06/23/23 17:37	1

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 0.00020 06/12/23 11:30 06/13/23 14:26 Mercury ND 0.00013 mg/L

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids (SM 2540C)	190		10	10	mg/L		<u> </u>	05/25/23 13:53	1	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac	
pH (SW846 EPA 9040C)	7.8	HE	0.1	0.1	SU			05/27/23 15:38	1	

2

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

SDG: Culley West

Client Sample ID: WAP-9I

Lab Sample ID: 180-156913-2

Matrix: Water

Job ID: 180-156913-1

Date Collected: 05/19/23 12:40 Date Received: 05/20/23 09:30

Method: SW846 9315	- Radium-226 (GFPC)
	Co

			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0273	U	0.116	0.116	1.00	0.223	pCi/L	05/31/23 09:27	06/23/23 09:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		30 - 110					05/31/23 09:27	06/23/23 09:16	1

Method: SW846 9320 - Radium-228 (GFPC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.150	U	0.474	0.474	1.00	0.835	pCi/L	05/31/23 09:30	06/21/23 14:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		30 - 110					05/31/23 09:30	06/21/23 14:29	1
Y Carrier	72.5		30 - 110					05/31/23 09:30	06/21/23 14:29	1

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

				a						
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.177	U	0.488	0.488	5.00	0.835	pCi/L		06/23/23 16:54	1
+ 228										

Client Sample ID: WAP-9D

Date Collected: 05/19/23 14:40 Date Received: 05/20/23 09:30 Lab Sample ID: 180-156913-3

Matrix: Water

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.71	mg/L			05/23/23 14:58	1
Fluoride	7.6		0.10	0.026	mg/L			05/23/23 14:58	1
Sulfate	24		1.0	0.76	mg/L			05/23/23 14:58	1

Method: SW846 EPA 6010D - Metals (ICP) - Total Recoverable										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Boron	240	В	200	13	ug/L		06/07/23 06:53	06/19/23 17:37	1

Analyte	Result C	Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	0.0020	0.00097	mg/L		06/07/23 07:02	06/23/23 17:40	1
Arsenic	0.015	0.0010	0.00028	mg/L		06/07/23 07:02	06/23/23 17:40	1
Barium	0.12	0.010	0.0031	mg/L		06/07/23 07:02	06/23/23 17:40	1
Beryllium	ND	0.0010	0.00027	mg/L		06/07/23 07:02	06/23/23 17:40	1
Cadmium	ND	0.0010	0.00022	mg/L		06/07/23 07:02	06/23/23 17:40	1
Calcium	22	0.50	0.13	mg/L		06/07/23 07:02	06/23/23 17:40	1
Chromium	0.0026	0.0020	0.0015	mg/L		06/07/23 07:02	06/23/23 17:40	1
Cobalt	0.0019	0.00050	0.00026	mg/L		06/07/23 07:02	06/23/23 17:40	1
Lead	0.0013	0.0010	0.00038	mg/L		06/07/23 07:02	06/23/23 17:40	1
Lithium	0.0053	0.0050	0.0013	mg/L		06/07/23 07:02	06/23/23 17:40	1
Molybdenum	0.014	0.0050	0.00061	mg/L		06/07/23 07:02	06/23/23 17:40	1
Selenium	ND	0.0050	0.00074	mg/L		06/07/23 07:02	06/23/23 17:40	1

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Job ID: 180-156913-1

SDG: Culley West

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-9D

Date Collected: 05/19/23 14:40

Lab Sample ID: 180-156913-3

Matrix: Water

Date Received: 05/20/23 09:30

Method: SW846 EPA 6020A - Metals (ICP/MS) - Total Recoverable (Continued)											
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Thallium	ND		0.0010	0.00047	mg/L		06/07/23 07:02	06/23/23 17:40	1		

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND	0.00020	0.00013 mg/L		06/12/23 11:30	06/13/23 14:27	1

General Chemistry

- 1										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Total Dissolved Solids (SM 2540C)	180		10	10	mg/L			05/25/23 13:53	1
	Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	pH (SW846 EPA 9040C)	6.6	HF	0.1	0.1	SU			05/27/23 15:41	1

Method: SW846 9315 - Radium-226 (GFPC

Method: 5w646 93			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.631		0.329	0.333	1.00	0.393	pCi/L	05/31/23 09:27	06/23/23 09:18	1
Carrier Ba Carrier	%Yield 52.2	Qualifier	Limits 30 - 110					Prepared 05/31/23 09:27	Analyzed 06/23/23 09:18	Dil Fac

Method: SW846 9320 - Radium-228 (GFPC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.391	UG	0.731	0.732	1.00	1.50	pCi/L	05/31/23 09:30	06/21/23 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	52.2		30 - 110					05/31/23 09:30	06/21/23 14:30	1
Y Carrier	71.0		30 - 110					05/31/23 09:30	06/21/23 14:30	1

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

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.240	U	0.802	0.804	5.00	1.50	pCi/L		06/23/23 16:54	1
+ 228										

Client Sample ID: WAP-6S	Lab Sample ID: 180-156913-4
Date Collected: 05/19/23 14:30	Matrix: Water
Date Received: 05/20/23 09:30	

Method: SW846 EPA 9056A -	- Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41		1.0	0.71	mg/L			05/23/23 15:17	1
Fluoride	0.24		0.10	0.026	mg/L			05/23/23 15:17	1
Sulfate	140		1.0	0.76	mg/L			05/23/23 15:17	1
-									

Method: SW846 EPA 6010D - Metals	s (IC	P)	- 7	ſotal	Recoverable
	_		_		

Analyte	Result Qualifier	RL	MDL Unit	: D	Prepared	Analyzed	Dil Fac
Boron	2600 B	200	13 ug/L		06/07/23 06:53	06/19/23 17:42	1

Client Sample ID: WAP-6S

Date Collected: 05/19/23 14:30

Date Received: 05/20/23 09:30

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-156913-4

Matrix: Water

Job ID: 180-156913-1

SDG: Culley West

Analyte	Result Q	ualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND		0.0020	0.00097	mg/L		06/07/23 07:02	06/23/23 17:43	1
Arsenic	0.0015		0.0010	0.00028	mg/L		06/07/23 07:02	06/23/23 17:43	1
Barium	0.066		0.010	0.0031	mg/L		06/07/23 07:02	06/23/23 17:43	1
Beryllium	ND		0.0010	0.00027	mg/L		06/07/23 07:02	06/23/23 17:43	1
Cadmium	ND		0.0010	0.00022	mg/L		06/07/23 07:02	06/23/23 17:43	1
Calcium	100		0.50	0.13	mg/L		06/07/23 07:02	06/23/23 17:43	1
Chromium	ND		0.0020	0.0015	mg/L		06/07/23 07:02	06/23/23 17:43	1
Cobalt	0.0011		0.00050	0.00026	mg/L		06/07/23 07:02	06/23/23 17:43	1
Lead	ND		0.0010	0.00038	mg/L		06/07/23 07:02	06/23/23 17:43	1
Lithium	0.0039 J		0.0050	0.0013	mg/L		06/07/23 07:02	06/23/23 17:43	1
Molybdenum	0.13		0.0050	0.00061	mg/L		06/07/23 07:02	06/23/23 17:43	1
Selenium	ND		0.0050	0.00074	mg/L		06/07/23 07:02	06/23/23 17:43	1
Thallium	ND		0.0010	0.00047	mg/L		06/07/23 07:02	06/23/23 17:43	1
Method: SW846 EPA 74	70A - Mercury (CVA	A)							
Analyte	Result Q	•	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND		0.00020	0.00013	mg/L		06/12/23 11:30	06/13/23 14:31	1

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	540		10	10	mg/L			05/25/23 13:53	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.4	HF	0.1	0.1	SU			05/27/23 15:44	1

Method: SW846	9315 - Radiu	ım-226 (GF	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0182	U	0.120	0.120	1.00	0.242	pCi/L	05/31/23 09:27	06/23/23 09:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		30 - 110					05/31/23 09:27	06/23/23 09:19	1

Method: SW846	9320 - Radiu	ım-228 (GI	FPC)							
		·	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.138	U	0.423	0.423	1.00	0.764	pCi/L	05/31/23 09:30	06/21/23 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		30 - 110					05/31/23 09:30	06/21/23 14:30	1
Y Carrier	71.4		30 - 110					05/31/23 09:30	06/21/23 14:30	1

Method: TAL-STL R	a226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.156	U	0.440	0.440	5.00	0.764	pCi/L		06/23/23 16:54	1

Client Sample ID: WAP-6I

Date Collected: 05/18/23 15:40

Date Received: 05/20/23 09:30

Job ID: 180-156913-1 SDG: Culley West

Lab Sample ID: 180-156913-5

Matrix: Water

Chloride Fluoride Sulfate Method: SW846 EPA 6010D - N Analyte Boron Method: SW846 EPA 6020A - N Analyte Antimony	Result	Qualifier		0.026	mg/L mg/L mg/L			05/23/23 15:13 05/23/23 15:13	1
Method: SW846 EPA 6010D - N Analyte Boron Method: SW846 EPA 6020A - N Analyte	39 Metals (ICP) Result	Qualifier	1.0		Ü				
Method: SW846 EPA 6010D - N Analyte Boron Method: SW846 EPA 6020A - N Analyte	letals (ICP) Result	Qualifier	coverable	0.76	mg/L			05/00/00 45:40	
Analyte Boron Method: SW846 EPA 6020A - N Analyte	Result	Qualifier						05/23/23 15:13	1
Boron Method: SW846 EPA 6020A - N Analyte			D'						
Method: SW846 EPA 6020A - N Analyte	51		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte		JB	200	13	ug/L	 _	06/07/23 06:53	06/19/23 17:47	1
	letals (ICP/	MS) - Tota	l Recoverab	le					
Antimony	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
,	ND		0.0020	0.00097	mg/L		06/07/23 07:02	06/23/23 17:46	1
Arsenic	0.0057		0.0010	0.00028	mg/L		06/07/23 07:02	06/23/23 17:46	1
Barium	0.14		0.010	0.0031	mg/L		06/07/23 07:02	06/23/23 17:46	1
Beryllium	ND		0.0010	0.00027	mg/L		06/07/23 07:02	06/23/23 17:46	1
Cadmium	ND		0.0010	0.00022	mg/L		06/07/23 07:02	06/23/23 17:46	1
Calcium	35		0.50	0.13	mg/L		06/07/23 07:02	06/23/23 17:46	1
Chromium	ND		0.0020	0.0015	mg/L		06/07/23 07:02	06/23/23 17:46	1
Cobalt	ND		0.00050	0.00026	mg/L		06/07/23 07:02	06/23/23 17:46	1
Lead	ND		0.0010	0.00038	mg/L		06/07/23 07:02	06/23/23 17:46	1
Lithium	0.0033	J	0.0050	0.0013	mg/L		06/07/23 07:02	06/23/23 17:46	1
Molybdenum	0.0046		0.0050	0.00061	mg/L		06/07/23 07:02	06/23/23 17:46	1
Selenium	ND		0.0050	0.00074	mg/L		06/07/23 07:02	06/23/23 17:46	1
Thallium	ND		0.0010	0.00047	mg/L		06/07/23 07:02	06/23/23 17:46	1
Method: SW846 EPA 7470A - N	Mercury (CV	/AA)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/09/23 12:15	06/10/23 12:34	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	180		10	10	mg/L			05/23/23 21:03	1
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.8	HF	0.1	0.1	SU			05/27/23 15:46	1
Method: SW846 9315 - Radium	n-226 (GFP)	C)							
		Count	Total						

Radium-226	0.197	0.132	0.133	1.00	0.173	pCi/L	05/31/23 09:27	06/23/23 09:19	1
Carrier Ba Carrier	%Yield Q 87.2	Limits 30 - 110					Prepared 05/31/23 09:27	Analyzed 06/23/23 09:19	Dil Fac
Method: SW846 932	20 - Radium	-228 (GFPC)							
		Count Uncert.	Total Uncert.						
Analyte	Result Q	ualifier (2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.187 U	0.319	0.319	1.00	0.673	pCi/L	05/31/23 09:30	06/21/23 14:30	1

RL

MDC Unit

Prepared

Uncert.

 $(2\sigma + / -)$

Uncert.

 $(2\sigma + / -)$

Result Qualifier

Analyte

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 87.2 30 - 110 05/31/23 09:30 06/21/23 14:30

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Analyzed

Dil Fac

Client: Haley & Aldrich, Inc. Job ID: 180-156913-1 Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-61 Lab Sample ID: 180-156913-5

Date Collected: 05/18/23 15:40 **Matrix: Water** Date Received: 05/20/23 09:30

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

%Yield Qualifier Prepared Analyzed Dil Fac Y Carrier 67.3 30 - 110 05/31/23 09:30 06/21/23 14:30

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

ND

ND

			Count	iotai						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.00967	Ū .	0.345	0.346	5.00	0.673	pCi/L		06/23/23 16:54	1

Lab Sample ID: 180-156913-6 Client Sample ID: WAP-6D Date Collected: 05/18/23 16:30 **Matrix: Water**

Date Received: 05/20/23 09:30

+ 228

Selenium

Thallium

Method: SW846 EPA 9056A - Anions, Ion Chromatography Analyte Result Qualifier RI MDL Unit D Analyzed Dil Fac Prepared 05/23/23 15:28 Chloride 21 1.0 0.71 mg/L **Fluoride** 0.10 0.026 mg/L 05/23/23 15:28 0.14 05/23/23 15:28 1.0 0.76 mg/L **Sulfate** 40

Method: SW846 EPA 6010D - Metals (ICP) - Total Recoverable Analyte Result Qualifier MDL Unit Prepared Analyzed Dil Fac 57 JB 200 13 ug/L 06/07/23 06:53 06/19/23 17:52 **Boron**

Method: SW846 EPA 6020A - Metals (ICP/MS) - Total Recoverable **Analyte** Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Antimony $\overline{\mathsf{ND}}$ 0.0020 0.00097 mg/L 06/07/23 07:02 06/23/23 17:48 0.0050 0.0010 0.00028 mg/L 06/07/23 07:02 06/23/23 17:48 **Arsenic Barium** 0.18 0.010 0.0031 mg/L 06/07/23 07:02 06/23/23 17:48 0.00027 mg/L Beryllium ND 0.0010 06/07/23 07:02 06/23/23 17:48 ND 0.0010 0.00022 mg/L 06/07/23 07:02 06/23/23 17:48 Cadmium 06/07/23 07:02 06/23/23 17:48 **Calcium** 40 0.50 0.13 mg/L Chromium ND 0.0020 0.0015 mg/L 06/07/23 07:02 06/23/23 17:48 Cobalt ND 0.00050 0.00026 mg/L 06/07/23 07:02 06/23/23 17:48 Lead ND 0.0010 0.00038 mg/L 06/07/23 07:02 06/23/23 17:48 06/07/23 07:02 06/23/23 17:48 Lithium 0.0026 0.0050 0.0013 mg/L Molybdenum 0.0021 0.0050 0.00061 mg/L 06/07/23 07:02 06/23/23 17:48

Method: SW846 EPA 7470A - Mercury (CVAA) Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Mercury ND 0.00020 0.00013 mg/L 06/09/23 12:15 06/10/23 12:35

0.0050

0.0010

0.00074 mg/L

0.00047 mg/L

General Chemistry Analyte Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac **Total Dissolved Solids (SM 2540C)** 200 10 10 mg/L 05/23/23 21:03 RL RL D Analyte Result Qualifier Unit Prepared Analyzed Dil Fac 0.1 SU pH (SW846 EPA 9040C) 7.8 HF 0.1 05/27/23 15:49

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06/07/23 07:02 06/23/23 17:48

06/07/23 07:02 06/23/23 17:48

SDG: Culley West

6/27/2023

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-156913-6

Matrix: Water

Job ID: 180-156913-1

SDG: Culley West

Date Collected: 05/18/23 16:30)
Date Received: 05/20/23 09:30	

Client Sample ID: WAP-6D

Method: SW846	9315 - Radiu	ım-226 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.211		0.144	0.146	1.00	0.200	pCi/L	05/31/23 09:27	06/23/23 09:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.1		30 - 110					05/31/23 09:27	06/23/23 09:19	1

Method: SW846	9320 - Radiu	ım-228 (GI	FPC)							
Analyte	Rosult	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analvzed	Dil Fac
			` _	``	NL _					DII Fac
Radium-228	0.502	U	0.394	0.397	1.00	0.610	pCi/L	05/31/23 09:30	06/21/23 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.1		30 - 110					05/31/23 09:30	06/21/23 14:30	1
Y Carrier	80.7		30 - 110					05/31/23 09:30	06/21/23 14:30	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 ar	nd Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.713		0.419	0.423	5.00	0.610	pCi/L		06/23/23 16:54	1

Lab Sample ID: 180-156913-7 **Client Sample ID: WAP-1** Date Collected: 05/18/23 17:50 **Matrix: Water** Date Received: 05/20/23 09:30

Analyte	Result C	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	49		1.0	0.71	mg/L			05/23/23 16:12	1
Fluoride	0.66		0.10	0.026	mg/L			05/23/23 16:12	1
Sulfate	260		1.0	0.76	mg/L			05/23/23 16:12	1

Method: SW846 EPA 6010D - N	letals (ICP)	- Total Re	coverable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	25	JB	200	13	ug/L		06/07/23 06:53	06/19/23 17:58	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		06/07/23 07:02	06/23/23 17:51	1
Arsenic	0.0048		0.0010	0.00028	mg/L		06/07/23 07:02	06/23/23 17:51	1
Barium	0.46		0.010	0.0031	mg/L		06/07/23 07:02	06/23/23 17:51	1
Beryllium	ND		0.0010	0.00027	mg/L		06/07/23 07:02	06/23/23 17:51	1
Cadmium	ND		0.0010	0.00022	mg/L		06/07/23 07:02	06/23/23 17:51	1
Calcium	180		0.50	0.13	mg/L		06/07/23 07:02	06/23/23 17:51	1
Chromium	0.0056		0.0020	0.0015	mg/L		06/07/23 07:02	06/23/23 17:51	1
Cobalt	0.0015		0.00050	0.00026	mg/L		06/07/23 07:02	06/23/23 17:51	1
Lead	0.0043		0.0010	0.00038	mg/L		06/07/23 07:02	06/23/23 17:51	1
Lithium	0.0074		0.0050	0.0013	mg/L		06/07/23 07:02	06/23/23 17:51	1
Molybdenum	0.00076	J	0.0050	0.00061	mg/L		06/07/23 07:02	06/23/23 17:51	1
Selenium	ND		0.0050	0.00074	ma/L		06/07/23 07:02	06/23/23 17:51	1

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Client Sample ID: WAP-1

Date Collected: 05/18/23 17:50

Date Received: 05/20/23 09:30

Job ID: 180-156913-1 SDG: Culley West

Lab Sample ID: 180-156913-7

Matrix: Water

Method: SW846 EPA 6020A - Me	tals (ICP/	MS) - Total	l Recoverab	le (Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		0.0010	0.00047	mg/L		06/07/23 07:02	06/23/23 17:51	1
- Method: SW846 EPA 7470A - Me	ercury (CV	/AA)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/09/23 12:15	06/10/23 12:36	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	820		10	10	mg/L			05/23/23 21:03	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	7.4	HF	0.1	0.1	SU			05/27/23 15:52	1

Method: SW846 93	315 - Radiu	ım-226 (GI	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.437		0.221	0.224	1.00	0.260	pCi/L	05/31/23 09:27	06/23/23 09:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.5		30 - 110					05/31/23 09:27	06/23/23 09:19	1

9320 - Radiu	ım-228 (GF	FPC)							
		Count	Total						
		Uncert.	Uncert.						
Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
0.823	U	0.593	0.597	1.00	0.896	pCi/L	05/31/23 09:30	06/21/23 14:30	1
%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
87.5		30 - 110					05/31/23 09:30	06/21/23 14:30	1
71.4		30 - 110					05/31/23 09:30	06/21/23 14:30	1
	Result 0.823 %Yield 87.5	Result Qualifier 0.823 U %Yield Qualifier 87.5	Nesult Qualifier (2σ+/-)	Count Uncert. Uncert. (2σ+/-) (2σ+/-) 0.823	Count Uncert. Uncert. Uncert.	Count Uncert. Uncert. Uncert.	Count Uncert. Uncert. Uncert. Count Uncer	Count Uncert. Uncert. Count Uncert. Cou	Count Uncert. Uncert.

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.26		0.633	0.638	5.00	0.896	pCi/L		06/23/23 16:54	1

Lab Sample ID: 180-156913-8 **Client Sample ID: WAP-4S** Date Collected: 05/18/23 13:15 **Matrix: Water** Date Received: 05/20/23 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		1.0	0.71	mg/L			05/23/23 16:27	1
Fluoride	0.23		0.10	0.026	mg/L			05/23/23 16:27	1
Sulfate	450		1.0	0.76	mg/L			05/23/23 16:27	1
Method: SW846 EPA	6010D - Metals (ICP)	- Total Rec	overable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

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Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-156913-8

Matrix: Water

SDG: Culley West

Job ID: 180-156913-1

Client Sample ID: WAP-4S Date Collected: 05/18/23 13:15 Date Received: 05/20/23 09:30

Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony		ND		0.0020	0.00097	mg/L		06/07/23 07:02	06/23/23 18:11	
Arsenic		0.027		0.0010	0.00028	mg/L		06/07/23 07:02	06/23/23 18:11	
Barium		0.069		0.010	0.0031	mg/L		06/07/23 07:02	06/23/23 18:11	
Beryllium		ND		0.0010	0.00027	mg/L		06/07/23 07:02	06/23/23 18:11	
Cadmium		ND		0.0010	0.00022	mg/L		06/07/23 07:02	06/23/23 18:11	
Calcium		290		0.50	0.13	mg/L		06/07/23 07:02	06/23/23 18:11	
Chromium		ND		0.0020	0.0015	mg/L		06/07/23 07:02	06/23/23 18:11	
Cobalt		0.0017		0.00050	0.00026	mg/L		06/07/23 07:02	06/23/23 18:11	
Lead		0.00038	J	0.0010	0.00038	mg/L		06/07/23 07:02	06/23/23 18:11	
Lithium		0.0019	J	0.0050	0.0013	mg/L		06/07/23 07:02	06/23/23 18:11	
Molybdenum		0.58		0.0050	0.00061	mg/L		06/07/23 07:02	06/23/23 18:11	
Selenium		ND		0.0050	0.00074	mg/L		06/07/23 07:02	06/23/23 18:11	
Thallium		ND		0.0010	0.00047	mg/L		06/07/23 07:02	06/23/23 18:11	
Method: SW846 EPA 74	70A -	Mercury (C\	/AA)							
Analyte		• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Mercury		ND		0.00020	0.00013	mg/L		06/09/23 12:15	06/10/23 12:37	
General Chemistry										
Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids (SM	2540C) 1200		10	10	mg/L			05/23/23 21:03	
Analyte		Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
pH (SW846 EPA 9040C)		7.4	HF	0.1	0.1	SU			05/27/23 15:55	
Method: SW846 9315 - I	Radiu	m-226 (GFP)	C)							
			Count	Total						
			Uncert.	Uncert.						
Analyte F	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL I	MDC I	Jnit	Prepared	Analyzed	Dil Fa
Radium-226	0.211		0.143	0.144	1.00).194 p	oCi/L	05/31/23 09:27	06/23/23 09:20	
Carrier %	6Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fa
Ba Carrier	89.0		30 - 110					05/31/23 09:27	06/23/23 09:20	
	Dadiu	m-228 (GFP)	C)							
Method: SW846 9320 - I	Rauiu									
Method: SW846 9320 - I	Kaulu		Count	Total						
Method: SW846 9320 - I	Kaulu			Total Uncert.						
		Qualifier	Count		RL I	MDC (Jnit	Prepared	Analyzed	Dil Fa

Method: TAL-STL R	a226_Ra	228 - Com	bined Radi	um-226 an	nd Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.266	U	0.373	0.373	5.00	0.634	pCi/L		06/23/23 16:54	1

%Yield Qualifier

89.0

72.9

Carrier

Ba Carrier

Y Carrier

Limits

30 - 110

30 - 110

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Analyzed

Prepared

05/31/23 09:30 06/21/23 14:30

05/31/23 09:30 06/21/23 14:30

Dil Fac

Project/Site: CCR Groundwater Monitoring

Method: SW846 EPA 7470A - Mercury (CVAA)

80.3

pH (SW846 EPA 9040C)

Ba Carrier

SDG: Culley West **Client Sample ID: WAP-3S** Lab Sample ID: 180-156913-9

Date Collected: 05/19/23 17:30 Date Received: 05/20/23 09:30

Matrix: Water

Job ID: 180-156913-1

Method: SW846 EPA	9056A - Anions, Ion	Chromatog	graphy						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	100		1.0	0.71	mg/L			05/23/23 15:35	1
Fluoride	0.29		0.10	0.026	mg/L			05/23/23 15:35	1
Sulfate	380		1.0	0.76	mg/L			05/23/23 15:35	1
- Method: SW846 EPA	6010D - Metals (ICP)) - Total Red	coverable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5400	В	200	13	ug/L		06/07/23 06:53	06/19/23 18:39	1
- Method: SW846 EPA	6020A - Metals (ICP/	MS) - Total	Recoverab	le					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		06/07/23 07:02	06/23/23 18:14	1
Arsenic	0.00062	J	0.0010	0.00028	mg/L		06/07/23 07:02	06/23/23 18:14	1
Barium	0.068		0.010	0.0031	mg/L		06/07/23 07:02	06/23/23 18:14	1
Bervllium	ND		0.0010	0.00027	ma/L		06/07/23 07:02	06/23/23 18:14	1

Allalyte		Qualifiei	IXL	INIDL	0	 riepaieu	Allalyzeu	Diriac
Antimony	ND		0.0020	0.00097	mg/L	 06/07/23 07:02	06/23/23 18:14	1
Arsenic	0.00062	J	0.0010	0.00028	mg/L	06/07/23 07:02	06/23/23 18:14	1
Barium	0.068		0.010	0.0031	mg/L	06/07/23 07:02	06/23/23 18:14	1
Beryllium	ND		0.0010	0.00027	mg/L	06/07/23 07:02	06/23/23 18:14	1
Cadmium	ND		0.0010	0.00022	mg/L	06/07/23 07:02	06/23/23 18:14	1
Calcium	190		0.50	0.13	mg/L	06/07/23 07:02	06/23/23 18:14	1
Chromium	ND		0.0020	0.0015	mg/L	06/07/23 07:02	06/23/23 18:14	1
Cobalt	0.0011		0.00050	0.00026	mg/L	06/07/23 07:02	06/23/23 18:14	1
Lead	ND		0.0010	0.00038	mg/L	06/07/23 07:02	06/23/23 18:14	1
Lithium	0.12		0.0050	0.0013	mg/L	06/07/23 07:02	06/23/23 18:14	1
Molybdenum	0.52		0.0050	0.00061	mg/L	06/07/23 07:02	06/23/23 18:14	1
Selenium	ND		0.0050	0.00074	mg/L	06/07/23 07:02	06/23/23 18:14	1
Thallium	ND		0.0010	0.00047	mg/L	06/07/23 07:02	06/23/23 18:14	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		06/12/23 11:30	06/13/23 14:32	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	860		10	10	mg/L			05/25/23 13:53	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

0.1

0.1 SU

7.7 HF

30 - 110

Method: SW846	9315 - Radiu	ım-226 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.360		0.172	0.175	1.00	0.190	pCi/L	05/31/23 09:27	06/23/23 09:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac

mothod: Offoro	9320 - Radiu	IIII-220 (GI	10)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0733	U	0.338	0.338	1.00	0.657	pCi/L	05/31/23 09:30	06/21/23 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.3		30 - 110					05/31/23 09:30	06/21/23 14:30	

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05/27/23 15:57

05/31/23 09:27 06/23/23 09:24

Job ID: 180-156913-1

SDG: Culley West

Client Sample ID: WAP-3S Lab Sample ID: 180-156913-9 Date Collected: 05/19/23 17:30

Matrix: Water

Date Received: 05/20/23 09:30

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

%Yield Qualifier Limits Prepared Analyzed Dil Fac Y Carrier 81.5 30 - 110 05/31/23 09:30 06/21/23 14:30

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

Count Total Uncert. Uncert.

Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Analyte Prepared Analyzed Dil Fac Combined Radium 226 0.286 U 0.379 0.381 5.00 0.657 pCi/L 06/23/23 16:54

Client Sample ID: WAP-3D

Lab Sample ID: 180-156913-10 Date Collected: 05/19/23 16:40 **Matrix: Water**

Date Received: 05/20/23 09:30

Method: SW846 EPA 9056A - Anions, Ion Chromatography

Analyte Result Qualifier RL **MDL** Unit D Analyzed Dil Fac Prepared 05/23/23 15:53 Chloride 83 1.0 0.71 mg/L 05/23/23 15:53 **Fluoride** 0.19 0.10 0.026 mg/L 05/23/23 15:53 1.0 0.76 mg/L **Sulfate** 490

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

Analyte Result Qualifier MDL Unit **Prepared** Analyzed Dil Fac 200 13 ug/L 06/07/23 06:53 06/19/23 18:44 **Boron** 5400 B

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		06/07/23 07:02	06/23/23 18:17	1
Arsenic	0.00032	J	0.0010	0.00028	mg/L		06/07/23 07:02	06/23/23 18:17	1
Barium	0.024		0.010	0.0031	mg/L		06/07/23 07:02	06/23/23 18:17	1
Beryllium	ND		0.0010	0.00027	mg/L		06/07/23 07:02	06/23/23 18:17	1
Cadmium	0.00037	J	0.0010	0.00022	mg/L		06/07/23 07:02	06/23/23 18:17	1
Calcium	190		0.50	0.13	mg/L		06/07/23 07:02	06/23/23 18:17	1
Chromium	ND		0.0020	0.0015	mg/L		06/07/23 07:02	06/23/23 18:17	1
Cobalt	0.0012		0.00050	0.00026	mg/L		06/07/23 07:02	06/23/23 18:17	1
Lead	ND		0.0010	0.00038	mg/L		06/07/23 07:02	06/23/23 18:17	1
Lithium	0.10		0.0050	0.0013	mg/L		06/07/23 07:02	06/23/23 18:17	1
Molybdenum	0.26		0.0050	0.00061	mg/L		06/07/23 07:02	06/23/23 18:17	1
Selenium	ND		0.0050	0.00074	mg/L		06/07/23 07:02	06/23/23 18:17	1
Thallium	ND		0.0010	0.00047	mg/L		06/07/23 07:02	06/23/23 18:17	1

Method: SW846 EPA 7470A - Mercury (CVAA)

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac ND Mercury 0.00020 0.00013 mg/L 06/12/23 11:30 06/13/23 14:33

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1100		10	10	mg/L			05/25/23 13:53	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

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Client: Haley & Aldrich, Inc.

Client Sample ID: WAP-3D

Date Collected: 05/19/23 16:40

Date Received: 05/20/23 09:30

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-156913-10

Job ID: 180-156913-1

SDG: Culley West

Matrix: Water

Mothodi	 	 	
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metriou. Otto-to			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.267		0.137	0.139	1.00	0.148	pCi/L	05/31/23 09:27	06/23/23 09:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		30 - 110					05/31/23 09:27	06/23/23 09:24	1

Method: SW846 9320 - Radium-228 (GEPC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0682	U	0.314	0.314	1.00	0.572	pCi/L	05/31/23 09:30	06/21/23 14:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		30 - 110					05/31/23 09:30	06/21/23 14:30	1
Y Carrier	77.8		30 - 110					05/31/23 09:30	06/21/23 14:30	1

Method: TAL-STL Ra226 Ra228 - Combined Radium-226 and Radium-228

mothod: I/tE OIE I	·u ·u		ibilioa itaai	aiii zzo aii	a itaaiai					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.335	U	0.343	0.343	5.00	0.572	pCi/L	_	06/23/23 16:54	1
+ 228										

Client Sample ID: DUP 2

Lab Sample ID: 180-156913-11 Date Collected: 05/19/23 00:00 **Matrix: Water** Date Received: 05/20/23 09:30

Method: SW846 EPA 9056A - Anions, Ion Chromatography
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Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Chloride	83	1.0	0.71 mg/L		05/23/23 16:49	1
Fluoride	0.20	0.10	0.026 mg/L		05/23/23 16:49	1
Sulfate	490	1.0	0.76 mg/L		05/23/23 16:49	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5600	В	200	13	ua/L		06/07/23 06:53	06/19/23 18:49	1

Method: SW846 FPA 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		06/07/23 07:02	06/23/23 18:20	1
Arsenic	0.00033	J	0.0010	0.00028	mg/L		06/07/23 07:02	06/23/23 18:20	1
Barium	0.028		0.010	0.0031	mg/L		06/07/23 07:02	06/23/23 18:20	1
Beryllium	ND		0.0010	0.00027	mg/L		06/07/23 07:02	06/23/23 18:20	1
Cadmium	0.00059	J	0.0010	0.00022	mg/L		06/07/23 07:02	06/23/23 18:20	1
Calcium	230		0.50	0.13	mg/L		06/07/23 07:02	06/23/23 18:20	1
Chromium	ND		0.0020	0.0015	mg/L		06/07/23 07:02	06/23/23 18:20	1
Cobalt	0.0015		0.00050	0.00026	mg/L		06/07/23 07:02	06/23/23 18:20	1
Lead	ND		0.0010	0.00038	mg/L		06/07/23 07:02	06/23/23 18:20	1
Lithium	0.11		0.0050	0.0013	mg/L		06/07/23 07:02	06/23/23 18:20	1
Molybdenum	0.31		0.0050	0.00061	mg/L		06/07/23 07:02	06/23/23 18:20	1
Selenium	ND		0.0050	0.00074	mg/L		06/07/23 07:02	06/23/23 18:20	1

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Job ID: 180-156913-1 SDG: Culley West

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

Lab Sample ID: 180-156913-11

Matrix: Water

Client Sample ID: DUP 2 Date Collected: 05/19/23 00:00 Date Received: 05/20/23 09:30

Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Thallium		ND		0.0010	0.00047	mg/L		06/07/23 07:02	06/23/23 18:20	
Method: SW846 EPA 74	70A -	Mercury (CV	/AA)							
Analyte		• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Mercury		ND		0.00020	0.00013	mg/L		06/12/23 11:30	06/13/23 14:34	
General Chemistry										
Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids (SM	2540C) 1000		10	10	mg/L			05/25/23 13:53	
Analyte		Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
pH (SW846 EPA 9040C)		7.7	HF	0.1	0.1	SU			05/27/23 16:11	
Method: SW846 9315 - F	Radiu	m-226 (GFP)	C)							
			Count	Total						
			Uncert.	Uncert.						
Analyte F	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC U	nit	Prepared	Analyzed	Dil Fa
Radium-226 0	0.0949	<u>U</u>	0.127	0.128	1.00).214 p(Ci/L	05/31/23 09:27	06/23/23 09:25	
Naululli-220 0										
	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fa

9320 - Radiu	ım-228 (GI	FPC)							
		Count	Total						
		Uncert.	Uncert.						
Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
0.292	U	0.342	0.343	1.00	0.563	pCi/L	05/31/23 09:30	06/21/23 14:31	1
%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
90.5		30 - 110					05/31/23 09:30	06/21/23 14:31	1
78.1		30 - 110					05/31/23 09:30	06/21/23 14:31	1
	Result 0.292 %Yield 90.5	Result Qualifier 0.292 U %Yield Qualifier 90.5	Result Qualifier (2σ+/-) 0.292 U	Count Uncert. Uncert. Uncert. (2σ+/-) (2σ+/-) (Count Uncert. Uncert. Uncert.	Count Uncert. Uncert. Variety Variety	Count Uncert. Uncert. Count Uncert. Cou	Count Uncert. Uncert. Variety Count Uncert. Variety Variety Count Uncert. Variety Count Uncert. Variety Variety Variety Count Uncert. Variety Varie	Count Uncert. Uncert. Uncert. Variety V

Method: TAL-STL R	a226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.387	U	0.365	0.366	5.00	0.563	pCi/L		06/23/23 16:54	1

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: Culley West

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-435927/6

Matrix: Water

Analyte

Chloride

Fluoride

Sulfate

Analysis Batch: 435927

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

MB MB Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac ND 1.0 0.71 mg/L 05/23/23 13:15 ND 0.10 0.026 mg/L 05/23/23 13:15 ND 1.0 0.76 mg/L 05/23/23 13:15

Lab Sample ID: LCS 180-435927/7

Matrix: Water

Analysis Batch: 435927

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

Spike LCS LCS %Rec Limits Analyte Added Result Qualifier Unit D %Rec Chloride 50.0 48.6 mg/L 97 80 - 120 Fluoride 2.50 2.59 mg/L 104 80 - 120 Sulfate 50.0 mg/L 80 - 120 48.2 96

Lab Sample ID: MB 180-435949/6

Matrix: Water

Analysis Batch: 435949

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: WAP-9S

Client Sample ID: WAP-9S

Prep Type: Total/NA

Prep Type: Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			05/23/23 13:07	1
Fluoride	ND		0.10	0.026	mg/L			05/23/23 13:07	1
Sulfate	ND		1.0	0.76	mg/L			05/23/23 13:07	1

MR MR

Lab Sample ID: LCS 180-435949/7

Matrix: Water

Analysis Batch: 435949

7 many one Datem 1000 is								
-	Sı	pike L	CS LCS				%Rec	
Analyte	Ad	lded Res	ult Qualifier	r Unit	D	%Rec	Limits	
Chloride		50.0 50	0.0	mg/L	_	100	80 - 120	
Fluoride	:	2.50 2.	.48	mg/L		99	80 - 120	
Sulfate		50.0 50	0.3	mg/L		101	80 - 120	

Lab Sample ID: 180-156913-1 MS

Matrix: Water

Analysis Batch: 435949

7 , 0.0	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	25		50.0	73.9		mg/L		98	80 - 120	
Fluoride	0.34		2.50	3.09		mg/L		110	80 - 120	
Sulfate	64		50.0	112		mg/L		95	80 - 120	

Lab Sample ID: 180-156913-1 MSD

Matrix: Water

Analysis Batch: 435949

Alialysis Datell. 400040											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	25		50.0	73.7		mg/L		98	80 - 120	0	15
Fluoride	0.34		2.50	3.15		mg/L		112	80 - 120	2	15
Sulfate	64		50.0	112		mg/L		95	80 - 120	0	15

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: Culley West

Method: EPA 6010D - Metals (ICP)

Lab Sample ID: MB 180-437189/1-A

Matrix: Water

Analysis Batch: 438432

Analysis Batch: 438432

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

Prep Batch: 437189

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte D Prepared 200 06/07/23 06:53 06/19/23 16:14 Boron 15.5 J 13 ug/L

Lab Sample ID: LCS 180-437189/2-A **Matrix: Water**

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 437189

Client Sample ID: WAP-1

Prep Type: Total Recoverable

Spike LCS LCS %Rec

Added Result Qualifier Unit D %Rec Limits Analyte 1250 80 - 120 Boron 1410 ug/L 112

Lab Sample ID: 180-156913-7 MS Client Sample ID: WAP-1 **Matrix: Water Prep Type: Total Recoverable Analysis Batch: 438432 Prep Batch: 437189**

Sample Sample Spike MS MS %Rec

Result Qualifier Added Result Qualifier Limits Analyte Unit %Rec Boron 25 JB 1250 1430 75 - 125 ug/L

Lab Sample ID: 180-156913-7 MSD

Matrix: Water

Analysis Batch: 438432 Prep Batch: 437189 Spike MSD MSD %Rec **RPD** Sample Sample Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit

Analyte 25 JB 1250 1450 Boron ug/L 114 75 - 125 20

Method: EPA 6020A - Metals (ICP/MS)

Lab Sample ID: MB 180-437190/1-A

Matrix: Water

Analysis Batch: 438909

Client Sample ID: Method Blank **Prep Type: Total Recoverable Prep Batch: 437190**

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00097	mg/L		06/07/23 07:02	06/23/23 16:59	1
Arsenic	ND		0.0010	0.00028	mg/L		06/07/23 07:02	06/23/23 16:59	1
Barium	ND		0.010	0.0031	mg/L		06/07/23 07:02	06/23/23 16:59	1
Beryllium	ND		0.0010	0.00027	mg/L		06/07/23 07:02	06/23/23 16:59	1
Cadmium	ND		0.0010	0.00022	mg/L		06/07/23 07:02	06/23/23 16:59	1
Calcium	ND		0.50	0.13	mg/L		06/07/23 07:02	06/23/23 16:59	1
Chromium	ND		0.0020	0.0015	mg/L		06/07/23 07:02	06/23/23 16:59	1
Cobalt	ND		0.00050	0.00026	mg/L		06/07/23 07:02	06/23/23 16:59	1
Lead	ND		0.0010	0.00038	mg/L		06/07/23 07:02	06/23/23 16:59	1
Lithium	ND		0.0050	0.0013	mg/L		06/07/23 07:02	06/23/23 16:59	1
Molybdenum	ND		0.0050	0.00061	mg/L		06/07/23 07:02	06/23/23 16:59	1
Selenium	ND		0.0050	0.00074	mg/L		06/07/23 07:02	06/23/23 16:59	1
Thallium	ND		0.0010	0.00047	mg/L		06/07/23 07:02	06/23/23 16:59	1

Lab Sample ID: LCS 180-437190/2-A

Matrix: Water

Client Sample ID: Lab Control Sample **Prep Type: Total Recoverable Analysis Batch: 438909 Prep Batch: 437190** Spike LCS LCS %Rec

Added Limits Analyte Result Qualifier Unit %Rec Antimony 0.250 0.268 mg/L 107 80 - 120

Eurofins Pittsburgh

Client: Haley & Aldrich, Inc.

Job ID: 180-156913-1 Project/Site: CCR Groundwater Monitoring SDG: Culley West

Method: EPA 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-437190/2-A

Matrix: Water

Analysis Batch: 438909

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

Prep Batch: 437190

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	1.00	1.03		mg/L		103	80 - 120	
Barium	1.00	1.03		mg/L		103	80 - 120	
Beryllium	0.500	0.517		mg/L		103	80 - 120	
Cadmium	0.500	0.491		mg/L		98	80 - 120	
Calcium	25.0	28.5		mg/L		114	80 - 120	
Chromium	0.500	0.485		mg/L		97	80 - 120	
Cobalt	0.500	0.493		mg/L		99	80 - 120	
Lead	0.500	0.508		mg/L		102	80 - 120	
Lithium	0.500	0.479		mg/L		96	80 - 120	
Molybdenum	0.500	0.564		mg/L		113	80 - 120	
Selenium	1.00	0.940		mg/L		94	80 - 120	
Thallium	1.00	0.989		mg/L		99	80 - 120	

Lab Sample ID: 180-156913-7 MS

Matrix: Water

Client Sample ID: WAP-1 Prep Type: Total Recoverable

								Prep Batch: 437190
Sample	Sample	Spike	MS	MS				%Rec
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
ND		0.250	0.268		mg/L		107	75 - 125
0.0048		1.00	1.03		mg/L		103	75 - 125
0.46		1.00	1.50		mg/L		103	75 - 125
ND		0.500	0.498		mg/L		100	75 - 125
ND		0.500	0.485		mg/L		97	75 - 125
180		25.0	205	4	mg/L		82	75 - 125
0.0056		0.500	0.474		mg/L		94	75 - 125
0.0015		0.500	0.473		mg/L		94	75 - 125
0.0043		0.500	0.506		mg/L		100	75 - 125
0.0074		0.500	0.485		mg/L		96	75 - 125
0.00076	J	0.500	0.565		mg/L		113	75 - 125
ND		1.00	0.920		mg/L		92	75 - 125
ND		1.00	0.966		mg/L		97	75 - 125
	Result ND 0.0048 0.46 ND ND 180 0.0056 0.0015 0.0043 0.0074 0.00076 ND	0.0048 0.46 ND ND 180 0.0056 0.0015 0.0043 0.0074 0.00076 J	Result Qualifier Added ND 0.250 0.0048 1.00 0.46 1.00 ND 0.500 ND 0.500 180 25.0 0.0056 0.500 0.0015 0.500 0.0043 0.500 0.0074 0.500 0.00076 J 0.500 ND 1.00	Result Qualifier Added Result ND 0.250 0.268 0.0048 1.00 1.03 0.46 1.00 1.50 ND 0.500 0.498 ND 0.500 0.485 180 25.0 205 0.0056 0.500 0.474 0.0015 0.500 0.473 0.0043 0.500 0.506 0.0074 0.500 0.485 0.00076 J 0.500 0.565 ND 1.00 0.920	Result Qualifier Added Result Qualifier ND 0.250 0.268 0.0048 1.00 1.03 0.46 1.00 1.50 ND 0.500 0.498 ND 0.500 0.485 180 25.0 205 4 0.0056 0.500 0.474 0.0015 0.500 0.473 0.0043 0.500 0.506 0.0074 0.500 0.485 0.00076 J 0.500 0.565 ND 1.00 0.920	Result Qualifier Added Result Qualifier Unit ND 0.250 0.268 mg/L 0.0048 1.00 1.03 mg/L 0.46 1.00 1.50 mg/L ND 0.500 0.498 mg/L ND 0.500 0.485 mg/L 180 25.0 205 4 mg/L 0.0056 0.500 0.474 mg/L 0.0015 0.500 0.473 mg/L 0.0043 0.500 0.506 mg/L 0.0074 0.500 0.485 mg/L 0.00076 J 0.500 0.565 mg/L ND 1.00 0.920 mg/L	Result Qualifier Added Result Qualifier Unit D ND 0.250 0.268 mg/L mg/L 0.0048 1.00 1.03 mg/L 0.46 1.00 1.50 mg/L ND 0.500 0.498 mg/L ND 0.500 0.485 mg/L 180 25.0 205 4 mg/L 0.0056 0.500 0.474 mg/L 0.0015 0.500 0.473 mg/L 0.0043 0.500 0.506 mg/L 0.0074 0.500 0.485 mg/L 0.00076 J 0.500 0.565 mg/L ND 1.00 0.920 mg/L	Result Qualifier Added Result Qualifier Unit D %Rec ND 0.250 0.268 mg/L 107 0.0048 1.00 1.03 mg/L 103 0.46 1.00 1.50 mg/L 103 ND 0.500 0.498 mg/L 100 ND 0.500 0.485 mg/L 97 180 25.0 205 4 mg/L 82 0.0056 0.500 0.474 mg/L 94 0.0015 0.500 0.473 mg/L 94 0.0043 0.500 0.506 mg/L 100 0.0074 0.500 0.485 mg/L 96 0.00076 J 0.500 0.565 mg/L 113 ND 1.00 0.920 mg/L 92

Lab Sample ID: 180-156913-7 MSD

Matrix: Water

Client Sample ID: WAP-1 Prep Type: Total Recoverable

Analysis Batch: 438909 Prep Batch: 437190 MSD MSD %Rec **RPD** Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Antimony ND 0.250 0.243 mg/L 97 75 - 125 10 20 Arsenic 0.0048 1.00 0.937 mg/L 93 75 - 125 20 Barium 0.46 1.00 1.38 mg/L 91 75 - 125 8 20 Beryllium ND 0.500 0.478 mg/L 96 75 - 125 20 Cadmium ND 0.500 0.445 mg/L 89 75 - 125 9 20 Calcium 180 25.0 189 4 mg/L 19 75 - 125 20 Chromium 0.0056 0.500 0.435 mg/L 86 75 - 125 20 Cobalt 0.500 0.436 87 75 - 125 20 0.0015 mg/L 0.500 0.464 92 Lead 0.0043 mg/L 75 - 125 20 Lithium 0.0074 0.500 0.481 mg/L 95 75 - 125 20 0.00076 J 0.500 0.524 105 75 - 125 20 Molybdenum mg/L Selenium ND 1.00 0.933 93 75 - 125 20 mg/L

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Job ID: 180-156913-1 SDG: Culley West

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Method: EPA 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-156913-7 MSD **Client Sample ID: WAP-1 Matrix: Water Prep Type: Total Recoverable Analysis Batch: 438909 Prep Batch: 437190** MSD MSD %Rec **RPD** Sample Sample Spike

Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Thallium ND 1 00 0.886 mg/L 89 75 - 125 9 20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-437524/1-A Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Water

Analysis Batch: 437591 Prep Batch: 437524

MB MB

Analyte Result Qualifier RL **MDL** Unit **Prepared** Analyzed Mercury ND 0.00020 0.00013 mg/L 06/09/23 12:15 06/10/23 12:06

Lab Sample ID: LCS 180-437524/2-A **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 437591

LCS LCS Spike %Rec

Analyte Added Result Qualifier Unit %Rec Limits 0.00250 80 - 120 Mercury 0.00249 99 mg/L

Lab Sample ID: MB 180-437669/1-A Client Sample ID: Method Blank Prep Type: Total/NA

Matrix: Water

Analysis Batch: 437829

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 06/12/23 11:30 06/13/23 14:03 Mercury ND 0.00020 0.00013 mg/L

Lab Sample ID: LCS 180-437669/2-A

Matrix: Water

Analysis Batch: 437829

LCS LCS Spike %Rec Added Analyte Result Qualifier Unit %Rec Limits Mercury 0.00250 0.00230 92 80 - 120 mg/L

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-436603/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 436603

Spike LCS LCS %Rec Added Result Qualifier Limits Analyte Unit D %Rec рН 7.00 7.0 SU 100 99 - 101

Lab Sample ID: LCS 180-436603/24 **Client Sample ID: Lab Control Sample**

Matrix: Water

Analysis Batch: 436603

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits pН 7.00 7.0 SU 100 99 - 101

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Prep Type: Total/NA

10

Prep Batch: 437524

Prep Batch: 437669

Prep Type: Total/NA

Prep Batch: 437669

Client Sample ID: Lab Control Sample

10

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: Culley West

0.3

Prep Type: Total/NA

Client Sample ID: WAP-3S

Client Sample ID: WAP-9S

Client Sample ID: WAP-3D

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Method: EPA 9040C - pH (Continued)

Lab Sample ID: 180-156913-1 DU

Matrix: Water Prep Type: Total/NA Analysis Batch: 436603 DU DU RPD Sample Sample Result Qualifier Result Qualifier Unit D RPD Limit Analyte

7.9

SU

Lab Sample ID: 180-156913-10 DU

Matrix: Water

рН

Analysis Batch: 436603

Sample Sample DU DU **RPD** Analyte Result Qualifier Result Qualifier Unit D RPD Limit 7.7 HF SU 0.3 рΗ 7.8

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

7.8 HF

Lab Sample ID: MB 180-435992/1

Matrix: Water

Analysis Batch: 435992

MB MB

Result Qualifier RL **MDL** Unit Dil Fac Analyte Prepared Analyzed Total Dissolved Solids 10 05/23/23 21:03 ND 10 mg/L

Lab Sample ID: LCS 180-435992/2

Matrix: Water

Analysis Batch: 435992

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit %Rec Limits Total Dissolved Solids 580 556 96 85 - 115 mg/L

Lab Sample ID: MB 180-436229/1

Matrix: Water

Analysis Batch: 436229

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Total Dissolved Solids ND 10 10 mg/L 05/25/23 13:53

Lab Sample ID: LCS 180-436229/2

Matrix: Water

Analysis Batch: 436229

LCS LCS Spike %Rec Added Result Qualifier Unit %Rec Limits Total Dissolved Solids 580 582 100 85 - 115 mg/L

Lab Sample ID: 180-156913-9 DU

Matrix: Water

Analysis Batch: 436229

DU DU **RPD** Sample Sample Result Qualifier Result Qualifier Unit D **RPD** Limit Total Dissolved Solids 860 864 mg/L

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Client: Haley & Aldrich, Inc.

Job ID: 180-156913-1 SDG: Culley West Project/Site: CCR Groundwater Monitoring

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-613843/1-A

Lab Sample ID: LCS 160-613843/2-A

Matrix: Water

Matrix: Water

Analysis Batch: 617526

Analysis Batch: 617526

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 613843

MB MB Uncert. Uncert. **MDC** Unit Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL Prepared Analyzed Dil Fac Radium-226 0.09956 U 0.106 0.106 1.00 0.166 pCi/L 05/31/23 09:27 06/23/23 09:16

Total

MB

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 91.3 30 - 110 05/31/23 09:27 06/23/23 09:16

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

10

Prep Batch: 613843

Total LCS LCS %Rec **Spike** Uncert. Analyte Added Result Qual $(2\sigma + / -)$ RL %Rec Limits MDC Unit 1.10 Radium-226 11.3 9.398 1.00 0.153 pCi/L 83 75 - 125

Count

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 98.2 30 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-613845/1-A

Matrix: Water

Analysis Batch: 617160

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 613845

Total Count MB MB Uncert. Uncert. Result Qualifier **MDC** Unit Analyte $(2\sigma + / -)$ $(2\sigma + / -)$ RL Prepared Analyzed Dil Fac Radium-228 -0.09773 Ū 0.338 0.339 1.00 0.663 pCi/L 05/31/23 09:30 06/21/23 14:29 MB MB

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 91.3 30 - 110 05/31/23 09:30 06/21/23 14:29 30 - 110 05/31/23 09:30 06/21/23 14:29 Y Carrier 70.7

Total

Lab Sample ID: LCS 160-613845/2-A

Matrix: Water

Analysis Batch: 617160

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 613845

Spike LCS LCS Uncert. %Rec Analyte Added Result Qual $(2\sigma + / -)$ RL MDC Unit %Rec Limits Radium-228 1.15 1.00 0.494 pCi/L 75 - 125 8.10 7.971 98

LCS LCS %Yield Qualifier Carrier Limits 30 - 110 Ba Carrier 98.2 80.0 Y Carrier 30 - 110

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6/27/2023

QC Association Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

HPLC/IC

Analysis Batch: 435927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-5	WAP-6I	Total/NA	Water	EPA 9056A	
180-156913-6	WAP-6D	Total/NA	Water	EPA 9056A	
180-156913-7	WAP-1	Total/NA	Water	EPA 9056A	
180-156913-8	WAP-4S	Total/NA	Water	EPA 9056A	
MB 180-435927/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-435927/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 435949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-1	WAP-9S	Total/NA	Water	EPA 9056A	
180-156913-2	WAP-9I	Total/NA	Water	EPA 9056A	
180-156913-3	WAP-9D	Total/NA	Water	EPA 9056A	
180-156913-4	WAP-6S	Total/NA	Water	EPA 9056A	
180-156913-9	WAP-3S	Total/NA	Water	EPA 9056A	
180-156913-10	WAP-3D	Total/NA	Water	EPA 9056A	
180-156913-11	DUP 2	Total/NA	Water	EPA 9056A	
MB 180-435949/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-435949/7	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-156913-1 MS	WAP-9S	Total/NA	Water	EPA 9056A	
180-156913-1 MSD	WAP-9S	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 437189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-1	WAP-9S	Total Recoverable	Water	3005A	_
180-156913-2	WAP-9I	Total Recoverable	Water	3005A	
180-156913-3	WAP-9D	Total Recoverable	Water	3005A	
180-156913-4	WAP-6S	Total Recoverable	Water	3005A	
180-156913-5	WAP-6I	Total Recoverable	Water	3005A	
180-156913-6	WAP-6D	Total Recoverable	Water	3005A	
180-156913-7	WAP-1	Total Recoverable	Water	3005A	
180-156913-8	WAP-4S	Total Recoverable	Water	3005A	
180-156913-9	WAP-3S	Total Recoverable	Water	3005A	
180-156913-10	WAP-3D	Total Recoverable	Water	3005A	
180-156913-11	DUP 2	Total Recoverable	Water	3005A	
MB 180-437189/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-437189/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-156913-7 MS	WAP-1	Total Recoverable	Water	3005A	
180-156913-7 MSD	WAP-1	Total Recoverable	Water	3005A	

Prep Batch: 437190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-1	WAP-9S	Total Recoverable	Water	3005A	<u> </u>
180-156913-2	WAP-9I	Total Recoverable	Water	3005A	
180-156913-3	WAP-9D	Total Recoverable	Water	3005A	
180-156913-4	WAP-6S	Total Recoverable	Water	3005A	
180-156913-5	WAP-6I	Total Recoverable	Water	3005A	
180-156913-6	WAP-6D	Total Recoverable	Water	3005A	
180-156913-7	WAP-1	Total Recoverable	Water	3005A	
180-156913-8	WAP-4S	Total Recoverable	Water	3005A	

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Job ID: 180-156913-1

SDG: Culley West

QC Association Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: Culley West

Metals (Continued)

Prep Batch: 437190 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-9	WAP-3S	Total Recoverable	Water	3005A	
180-156913-10	WAP-3D	Total Recoverable	Water	3005A	
180-156913-11	DUP 2	Total Recoverable	Water	3005A	
MB 180-437190/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-437190/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-156913-7 MS	WAP-1	Total Recoverable	Water	3005A	
180-156913-7 MSD	WAP-1	Total Recoverable	Water	3005A	

Prep Batch: 437524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-5	WAP-6I	Total/NA	Water	7470A	
180-156913-6	WAP-6D	Total/NA	Water	7470A	
180-156913-7	WAP-1	Total/NA	Water	7470A	
180-156913-8	WAP-4S	Total/NA	Water	7470A	
MB 180-437524/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-437524/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 437591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-5	WAP-6I	Total/NA	Water	EPA 7470A	437524
180-156913-6	WAP-6D	Total/NA	Water	EPA 7470A	437524
180-156913-7	WAP-1	Total/NA	Water	EPA 7470A	437524
180-156913-8	WAP-4S	Total/NA	Water	EPA 7470A	437524
MB 180-437524/1-A	Method Blank	Total/NA	Water	EPA 7470A	437524
LCS 180-437524/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	437524

Prep Batch: 437669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-1	WAP-9S	Total/NA	Water	7470A	<u> </u>
180-156913-2	WAP-9I	Total/NA	Water	7470A	
180-156913-3	WAP-9D	Total/NA	Water	7470A	
180-156913-4	WAP-6S	Total/NA	Water	7470A	
180-156913-9	WAP-3S	Total/NA	Water	7470A	
180-156913-10	WAP-3D	Total/NA	Water	7470A	
180-156913-11	DUP 2	Total/NA	Water	7470A	
MB 180-437669/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-437669/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 437829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-1	WAP-9S	Total/NA	Water	EPA 7470A	437669
180-156913-2	WAP-9I	Total/NA	Water	EPA 7470A	437669
180-156913-3	WAP-9D	Total/NA	Water	EPA 7470A	437669
180-156913-4	WAP-6S	Total/NA	Water	EPA 7470A	437669
180-156913-9	WAP-3S	Total/NA	Water	EPA 7470A	437669
180-156913-10	WAP-3D	Total/NA	Water	EPA 7470A	437669
180-156913-11	DUP 2	Total/NA	Water	EPA 7470A	437669
MB 180-437669/1-A	Method Blank	Total/NA	Water	EPA 7470A	437669
LCS 180-437669/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	437669

QC Association Summary

Client: Haley & Aldrich, Inc.

Job ID: 180-156913-1 Project/Site: CCR Groundwater Monitoring SDG: Culley West

Metals

Analysis Batch: 438432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-1	WAP-9S	Total Recoverable	Water	EPA 6010D	437189
180-156913-2	WAP-9I	Total Recoverable	Water	EPA 6010D	437189
180-156913-3	WAP-9D	Total Recoverable	Water	EPA 6010D	437189
180-156913-4	WAP-6S	Total Recoverable	Water	EPA 6010D	437189
180-156913-5	WAP-6I	Total Recoverable	Water	EPA 6010D	437189
180-156913-6	WAP-6D	Total Recoverable	Water	EPA 6010D	437189
180-156913-7	WAP-1	Total Recoverable	Water	EPA 6010D	437189
180-156913-8	WAP-4S	Total Recoverable	Water	EPA 6010D	437189
180-156913-9	WAP-3S	Total Recoverable	Water	EPA 6010D	437189
180-156913-10	WAP-3D	Total Recoverable	Water	EPA 6010D	437189
180-156913-11	DUP 2	Total Recoverable	Water	EPA 6010D	437189
MB 180-437189/1-A	Method Blank	Total Recoverable	Water	EPA 6010D	437189
LCS 180-437189/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6010D	437189
180-156913-7 MS	WAP-1	Total Recoverable	Water	EPA 6010D	437189
180-156913-7 MSD	WAP-1	Total Recoverable	Water	EPA 6010D	437189

Analysis Batch: 438909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-1	WAP-9S	Total Recoverable	Water	EPA 6020A	437190
180-156913-2	WAP-9I	Total Recoverable	Water	EPA 6020A	437190
180-156913-3	WAP-9D	Total Recoverable	Water	EPA 6020A	437190
180-156913-4	WAP-6S	Total Recoverable	Water	EPA 6020A	437190
180-156913-5	WAP-6I	Total Recoverable	Water	EPA 6020A	437190
180-156913-6	WAP-6D	Total Recoverable	Water	EPA 6020A	437190
180-156913-7	WAP-1	Total Recoverable	Water	EPA 6020A	437190
180-156913-8	WAP-4S	Total Recoverable	Water	EPA 6020A	437190
180-156913-9	WAP-3S	Total Recoverable	Water	EPA 6020A	437190
180-156913-10	WAP-3D	Total Recoverable	Water	EPA 6020A	437190
180-156913-11	DUP 2	Total Recoverable	Water	EPA 6020A	437190
MB 180-437190/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	437190
LCS 180-437190/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	437190
180-156913-7 MS	WAP-1	Total Recoverable	Water	EPA 6020A	437190
180-156913-7 MSD	WAP-1	Total Recoverable	Water	EPA 6020A	437190

General Chemistry

Analysis Batch: 435992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-5	WAP-6I	Total/NA	Water	SM 2540C	
180-156913-6	WAP-6D	Total/NA	Water	SM 2540C	
180-156913-7	WAP-1	Total/NA	Water	SM 2540C	
180-156913-8	WAP-4S	Total/NA	Water	SM 2540C	
MB 180-435992/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-435992/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 436229

L	ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
1	80-156913-1	WAP-9S	Total/NA	Water	SM 2540C	
1	80-156913-2	WAP-9I	Total/NA	Water	SM 2540C	
1	80-156913-3	WAP-9D	Total/NA	Water	SM 2540C	
1	80-156913-4	WAP-6S	Total/NA	Water	SM 2540C	

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-156913-1 SDG: Culley West

General Chemistry (Continued)

Analysis Batch: 436229 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-9	WAP-3S	Total/NA	Water	SM 2540C	
180-156913-10	WAP-3D	Total/NA	Water	SM 2540C	
180-156913-11	DUP 2	Total/NA	Water	SM 2540C	
MB 180-436229/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-436229/2	Lab Control Sample	Total/NA	Water	SM 2540C	
180-156913-9 DU	WAP-3S	Total/NA	Water	SM 2540C	

Analysis Batch: 436603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-1	WAP-9S	Total/NA	Water	EPA 9040C	
180-156913-2	WAP-9I	Total/NA	Water	EPA 9040C	
180-156913-3	WAP-9D	Total/NA	Water	EPA 9040C	
180-156913-4	WAP-6S	Total/NA	Water	EPA 9040C	
180-156913-5	WAP-6I	Total/NA	Water	EPA 9040C	
180-156913-6	WAP-6D	Total/NA	Water	EPA 9040C	
180-156913-7	WAP-1	Total/NA	Water	EPA 9040C	
180-156913-8	WAP-4S	Total/NA	Water	EPA 9040C	
180-156913-9	WAP-3S	Total/NA	Water	EPA 9040C	
180-156913-10	WAP-3D	Total/NA	Water	EPA 9040C	
180-156913-11	DUP 2	Total/NA	Water	EPA 9040C	
LCS 180-436603/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
LCS 180-436603/24	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-156913-1 DU	WAP-9S	Total/NA	Water	EPA 9040C	
180-156913-10 DU	WAP-3D	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 613843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-1	WAP-9S	Total/NA	Water	PrecSep-21	
180-156913-2	WAP-9I	Total/NA	Water	PrecSep-21	
180-156913-3	WAP-9D	Total/NA	Water	PrecSep-21	
180-156913-4	WAP-6S	Total/NA	Water	PrecSep-21	
180-156913-5	WAP-6I	Total/NA	Water	PrecSep-21	
180-156913-6	WAP-6D	Total/NA	Water	PrecSep-21	
180-156913-7	WAP-1	Total/NA	Water	PrecSep-21	
180-156913-8	WAP-4S	Total/NA	Water	PrecSep-21	
180-156913-9	WAP-3S	Total/NA	Water	PrecSep-21	
180-156913-10	WAP-3D	Total/NA	Water	PrecSep-21	
180-156913-11	DUP 2	Total/NA	Water	PrecSep-21	
MB 160-613843/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-613843/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 613845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-1	WAP-9S	Total/NA	Water	PrecSep_0	-
180-156913-2	WAP-9I	Total/NA	Water	PrecSep_0	
180-156913-3	WAP-9D	Total/NA	Water	PrecSep_0	
180-156913-4	WAP-6S	Total/NA	Water	PrecSep_0	
180-156913-5	WAP-6I	Total/NA	Water	PrecSep_0	
180-156913-6	WAP-6D	Total/NA	Water	PrecSep_0	

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Client: Haley & Aldrich, Inc.

Job ID: 180-156913-1 Project/Site: CCR Groundwater Monitoring SDG: Culley West

Rad (Continued)

Prep Batch: 613845 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-156913-7	WAP-1	Total/NA	Water	PrecSep_0	
180-156913-8	WAP-4S	Total/NA	Water	PrecSep_0	
180-156913-9	WAP-3S	Total/NA	Water	PrecSep_0	
180-156913-10	WAP-3D	Total/NA	Water	PrecSep_0	
180-156913-11	DUP 2	Total/NA	Water	PrecSep_0	
MB 160-613845/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-613845/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-156913-2

SDG Number: Culley West

List Source: Eurofins Pittsburgh

Login Number: 156913

List Number: 1

Creator: Abernathy, Eric L

Creator. Abernathy, End L		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	

ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

CCR Groundwater Monitoring SDG NUMBER FB Cully West

JOB NUMBER

180-157134-1

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh PA 15238



Eurofins Pittsburgh

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 Ken Hayes, Project Manager II Ken.Hayes@et.eurofinsus.com (615)301-5035

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

Laboratory Job ID: 180-157134-1 SDG: FB Cully West

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-157134-1 SDG: FB Cully West

Job ID: 180-157134-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative 180-157134-1

Receipt

The samples were received on 5/25/2023 9:50 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 2.3°C

Gas Flow Proportional Counter

Method 9315 Ra226: Radium-226 batch 614557Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.CCR-AP-7 (180-157134-1), CCR-AP-7 (180-157134-1[DU]), WAP 7D (180-157134-2), WAP 7S (180-157134-3), WAP 2R (180-157134-4), FIELD BLANK (180-157134-5), (LCS 160-614557/2-A) and (MB 160-614557/1-A)

Method 9320 Ra228: Radium-228 batch 614558Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.CCR-AP-7 (180-157134-1), CCR-AP-7 (180-157134-1[DU]), WAP 7D (180-157134-2), WAP 7S (180-157134-3), WAP 2R (180-157134-4), FIELD BLANK (180-157134-5), (LCS 160-614558/2-A) and (MB 160-614558/1-A)

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.

Narrative

Job Narrative 180-157134-2

Receipt

The samples were received on 5/25/2023 9:50 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 2.3°C

HPLC/IC

Method 9056A ORGFM 28D: The continuing calibration verification (CCV) associated with batch 180-436380 recovered above the upper control limit for fluoride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: FIELD BLANK (180-157134-5) and (CCV 180-436380/16).

Method 9056A ORGFM 28D: The following sample was diluted due to the nature of the sample matrix: WAP 7D (180-157134-2) at 2.5. Elevated reporting limits (RLs) are provided.

Method 9056A ORGFM 28D: The following sample was diluted due to the nature of the sample matrix: WAP 7D (180-157134-2) at 2.5. 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: The continuing calibration verification (CCV) associated with batch 240-577260 recovered above the upper control limit for beryllium. The samples associated with this CCV were less than the reporting limit for the affected analyte; therefore, the data have been reported. The associated samples are impacted: WAP 7D (180-157134-2) and WAP 7S (180-157134-3).

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

Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-157134-1 SDG: FB Cully West

Job ID: 180-157134-1 (Continued)

Laboratory: Eurofins Pittsburgh (Continued)

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.

Job ID: 180-157134-1 SDG: FB Cully West Project/Site: CCR Groundwater Monitoring

Qualifiers

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IVI	CLA	ı

Qualifier **Qualifier Description** ^+

Continuing Calibration Verification (CCV) 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

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 Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Rad

Qualifier **Qualifier Description**

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**

Detection Limit (DoD/DOE) DL

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample DL, RA, RE, IN

Decision Level Concentration (Radiochemistry) DLC

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)

Method Detection Limit MDI Minimum Level (Dioxin) ML MPN Most Probable Number MQL Method Quantitation Limit

NC Not Calculated

Not Detected at the reporting limit (or MDL or EDL if shown) ND

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit**

PRES Presumptive **Quality Control** QC

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points **RPD**

TEF Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

6/29/2023

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-157134-1 SDG: FB Cully 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	06-27-23
California	State	2891	04-30-24
Connecticut	State	PH-0688	09-30-24
Florida	NELAP	E871008	06-30-23
Georgia	State	PA 02-00416	04-30-24
Illinois	NELAP	004375	06-30-24
Kansas	NELAP	E-10350	01-31-24
Kentucky (UST)	State	162013	04-30-23 *
Kentucky (WW)	State	KY98043	12-31-23
Louisiana	NELAP	04041	06-30-22 *
Louisiana (All)	NELAP	04041	06-30-23
Maine	State	PA00164	03-06-24
Minnesota	NELAP	042-999-482	12-31-23
New Hampshire	NELAP	2030	04-04-24
New Jersey	NELAP	PA005	06-30-23
New York	NELAP	11182	04-01-24
North Carolina (WW/SW)	State	434	12-31-23
North Dakota	State	R-227	04-30-24
Oregon	NELAP	PA-2151	02-06-24
Pennsylvania	NELAP	02-00416	04-30-24
Rhode Island	State	LAO00362	12-31-22 *
South Carolina	State	89014	04-30-23 *
Texas	NELAP	T104704528	03-31-24
US Fish & Wildlife	US Federal Programs	058448	03-31-24
USDA	US Federal Programs	P330-16-00211	06-21-24
Utah	NELAP	PA001462019-8	05-31-23 *
Virginia	NELAP	10043	09-14-23
West Virginia DEP	State	142	03-31-24
Wisconsin	State	998027800	08-31-23

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	02-27-24
Connecticut	State	PH-0590	06-29-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-28-24
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-02-24
Ohio	State	8303	02-27-24
Ohio VAP	State	ORELAP 4062	02-27-24
Oregon	NELAP	4062	02-27-24

 $^{^{\}star} \ \text{Accreditation/Certification renewal pending - accreditation/certification considered valid}.$

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-157134-1 SDG: FB Cully 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
Pennsylvania Texas	NELAP NELAP	68-00340 T104704517-22-17	08-31-23 08-31-23
Virginia	NELAP	460175	09-14-23
West Virginia DEP	State	210	12-31-23

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	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
lowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-24
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-23

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 $^{{}^{\}star}\operatorname{Accreditation/Certification\ renewal\ pending\ -\ accreditation/certification\ considered\ valid}.$

Sample Summary

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

Job ID: 180-157134-1

SDG: FB Cully West

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-157134-1	CCR-AP-7	Water	05/22/23 11:20	05/25/23 09:50
180-157134-2	WAP 7D	Water	05/22/23 14:30	05/25/23 09:50
180-157134-3	WAP 7S	Water	05/22/23 13:20	05/25/23 09:50
180-157134-4	WAP 2R	Water	05/22/23 15:40	05/25/23 09:50
180-157134-5	FIFI D BI ANK	Water	05/22/23 13:20	05/25/23 09:50

Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-157134-1

SDG: FB Cully West

Laboratory	
EET SL	
EET SL	

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

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-157134-1 SDG: FB Cully West

Lab Sample ID: 180-157134-1

Matrix: Water

Client Sample ID: CCR-AP-7 Date Collected: 05/22/23 11:20 Date Received: 05/25/23 09:50

Batch Dil Initial Batch Batch Final Prepared Method **Factor** or Analyzed **Prep Type** Type Run **Amount** Amount Number **Analyst** Lab Total/NA EPA 9056A 436477 05/30/23 13:48 SNL EET PIT Analysis Instrument ID: CHIC2100A Total/NA Analysis **EPA 9056A** 1 mL 1 mL 436380 05/27/23 14:15 SNL **EET PIT** Instrument ID: CHICS2100B Total Recoverable Prep 3005A 50 mL 50 mL 575955 06/05/23 14:00 BN **EET CLE** Total Recoverable Analysis 6010D 1 576189 06/06/23 16:24 KLC **EET CLE** Instrument ID: 112 3005A Total Recoverable Prep 50 mL 50 mL 575955 06/05/23 14:00 BN **EET CLE** Total Recoverable Analysis 6020B 576217 06/06/23 22:39 RKT **EET CLE** 1 Instrument ID: 114 Total Recoverable 3005A 50 mL 50 mL 575955 EET CLE Prep 06/05/23 14:00 BN Total Recoverable Analysis 6020B 1 576385 06/07/23 18:19 RKT **EET CLE** Instrument ID: 114 Total/NA 7470A Prep 50 mL 50 mL 576992 06/13/23 14:00 BN **EET CLE** Total/NA Analysis 7470A 1 577182 06/14/23 12:36 MRL **EET CLE** Instrument ID: H3 Total/NA Analysis **EPA 9040C** 436894 06/02/23 17:30 BAB **EET PIT** Instrument ID: OZ Total/NA Analysis SM 2540C 436369 **EET PIT** 100 mL 100 mL 05/26/23 19:19 LWM Instrument ID: NOEQUIP PrecSep-21 Total/NA Prep 06/06/23 10:30 KAC **EET SL** 996.71 mL 1.0 g 614557 Total/NA Analysis 9315 1 618151 06/28/23 20:45 FLC EET SL Instrument ID: GFPCBLUE Total/NA Prep PrecSep 0 996.71 mL 1.0 g 614558 06/06/23 10:34 KAC EET SL Total/NA Analysis 9320 1 617527 06/23/23 11:49 FLC **EET SL** Instrument ID: GFPCBLUE Total/NA Analysis Ra226 Ra228 1 618364 06/29/23 16:50 SCB **EET SL** Instrument ID: NOEQUIP

Client Sample ID: WAP 7D Lab Sample ID: 180-157134-2 Date Collected: 05/22/23 14:30 **Matrix: Water**

Date Received: 05/25/23 09:50

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: CHIC2100A		2.5			436477	05/30/23 14:32	SNL	EET PIT
Total/NA	Analysis Instrumen	EPA 9056A t ID: CHICS2100B		2.5	1 mL	1 mL	436380	05/27/23 15:00	SNL	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	576981	06/13/23 14:00	BN	EET CLE
Total Recoverable	Analysis Instrumen	6010D t ID: 19		5			577186	06/14/23 17:51	KLC	EET CLE
Total Recoverable	Prep	3005A			50 mL	50 mL	576981	06/13/23 14:00	BN	EET CLE
Total Recoverable	Analysis Instrumen	6020B t ID: 114		1			577260	06/14/23 19:55	RKT	EET CLE

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Client: Haley & Aldrich, Inc.

Client Sample ID: WAP 7D

Date Collected: 05/22/23 14:30

Date Received: 05/25/23 09:50

Date Received: 05/25/23 09:50

Project/Site: CCR Groundwater Monitoring

Job ID: 180-157134-1 SDG: FB Cully West

Lab Sample ID: 180-157134-2

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	576992	06/13/23 14:00	BN	EET CLE
Total/NA	Analysis Instrumen	7470A t ID: H3		1			577182	06/14/23 12:47	MRL	EET CLE
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436894	06/02/23 17:36	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	436369	05/26/23 19:19	LWM	EET PIT
Total/NA	Prep	PrecSep-21			991.50 mL	1.0 g	614557	06/06/23 10:30	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1			618151	06/28/23 20:45	FLC	EET SL
Total/NA	Prep	PrecSep_0			991.50 mL	1.0 g	614558	06/06/23 10:34	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCPURPLE		1			617518	06/23/23 11:51	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			618364	06/29/23 16:50	SCB	EET SL

Client Sample ID: WAP 7S Lab Sample ID: 180-157134-3 Date Collected: 05/22/23 13:20

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: CHIC2100A		1			436477	05/30/23 14:46	SNL	EET PIT
Total/NA	Analysis Instrumen	EPA 9056A t ID: CHICS2100B		1	1 mL	1 mL	436380	05/27/23 15:14	SNL	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	576981	06/13/23 14:00	BN	EET CLE
Total Recoverable	Analysis Instrumen	6010D t ID: 19		5			577186	06/14/23 17:56	KLC	EET CLE
Total Recoverable	Prep	3005A			50 mL	50 mL	576981	06/13/23 14:00	BN	EET CLE
Total Recoverable	Analysis Instrumen	6020B t ID: 114		1			577260	06/14/23 19:57	RKT	EET CLE
Total/NA	Prep	7470A			50 mL	50 mL	576992	06/13/23 14:00	BN	EET CLE
Total/NA	Analysis Instrumen	7470A t ID: H3		1			577182	06/14/23 12:49	MRL	EET CLE
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			436894	06/02/23 17:23	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	436369	05/26/23 19:19	LWM	EET PIT
Total/NA	Prep	PrecSep-21			992.52 mL	1.0 g	614557	06/06/23 10:30	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1		-	618151	06/28/23 20:45	FLC	EET SL
Total/NA	Prep	PrecSep_0			992.52 mL	1.0 g	614558	06/06/23 10:34	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCPURPLE	<u> </u>	1			617518	06/23/23 11:51	FLC	EET SL

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-157134-1 SDG: FB Cully West

Lab Sample ID: 180-157134-3

Matrix: Water

Date Collected: 05/22/23 13:20 Date Received: 05/25/23 09:50

Client Sample ID: WAP 7S

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	Ra226_Ra228		1			618364	06/29/23 16:50	SCB	EET SL

Client Sample ID: WAP 2R Lab Sample ID: 180-157134-4 Date Collected: 05/22/23 15:40 **Matrix: Water**

Date Received: 05/25/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A at ID: CHIC2100A		1			436477	05/30/23 15:00	SNL	EET PIT
Total/NA	Analysis Instrumen	EPA 9056A at ID: CHICS2100B		1	1 mL	1 mL	436380	05/27/23 15:29	SNL	EET PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	575955	06/05/23 14:00	BN	EET CLE
Total Recoverable	Analysis Instrumen	6010D t ID: 112		1			576189	06/06/23 16:53	KLC	EET CLE
Total Recoverable	Prep	3005A			50 mL	50 mL	575955	06/05/23 14:00	BN	EET CLE
Total Recoverable	Analysis Instrumen	6020B at ID: 114		1			576217	06/06/23 22:52	RKT	EET CLE
Total Recoverable	Prep	3005A			50 mL	50 mL	575955	06/05/23 14:00	BN	EET CLE
Total Recoverable	Analysis Instrumen	6020B at ID: 114		1			576385	06/07/23 18:37	RKT	EET CLE
Total/NA	Prep	7470A			50 mL	50 mL	576649	06/09/23 14:00	MRL	EET CLE
Total/NA	Analysis Instrumen	7470A t ID: H2		1			576802	06/10/23 14:11	DSH	EET CLE
Total/NA	Analysis Instrumen	EPA 9040C at ID: OZ		1			436894	06/02/23 17:20	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	436369	05/26/23 19:19	LWM	EET PIT
Total/NA	Prep	PrecSep-21			948.68 mL	1.0 g	614557	06/06/23 10:30	KAC	EET SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1			618151	06/28/23 20:45	FLC	EET SL
Total/NA	Prep	PrecSep_0			948.68 mL	1.0 g	614558	06/06/23 10:34	KAC	EET SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCPURPLE	<u> </u>	1			617518	06/23/23 11:51	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			618364	06/29/23 16:50	SCB	EET SL

Client Sample ID: FIELD BLANK

Lab Sample ID: 180-157134-5 Date Collected: 05/22/23 13:20 **Matrix: Water**

Date Received: 05/25/23 09:50

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1	1 mL	1 mL	436380	05/27/23 15:44	SNL	EET PIT
	Instrumer	nt ID: CHICS2100B								

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Client: Haley & Aldrich, Inc.

Job ID: 180-157134-1 Project/Site: CCR Groundwater Monitoring SDG: FB Cully West

Client Sample ID: FIELD BLANK

Date Collected: 05/22/23 13:20 Date Received: 05/25/23 09:50 Lab Sample ID: 180-157134-5

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	50 mL	575955	06/05/23 14:00	BN	EET CLE
Total Recoverable	Analysis	6010D		1			576189	06/06/23 16:57	KLC	EET CLE
	Instrumen	t ID: 112								
Total Recoverable	Prep	3005A			50 mL	50 mL	575955	06/05/23 14:00	BN	EET CLE
Total Recoverable	Analysis Instrumen	6020B at ID: 114		1			576217	06/06/23 22:54	RKT	EET CLE
Total Recoverable	Prep	3005A			50 mL	50 mL	575955	06/05/23 14:00	BN	EET CLE
Total Recoverable	Analysis Instrumen	6020B at ID: 114		1			576385	06/07/23 18:40	RKT	EET CLE
Total/NA	Prep	7470A			50 mL	50 mL	576649	06/09/23 14:00	MRL	EET CLE
Total/NA	Analysis Instrumen	7470A at ID: H2		1			576802	06/10/23 14:18	DSH	EET CLE
Total/NA	Analysis Instrumen	EPA 9040C at ID: OZ		1			436894	06/02/23 17:17	BAB	EET PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	436369	05/26/23 19:19	LWM	EET PIT
Total/NA	Prep	PrecSep-21			992.29 mL	1.0 g	614557	06/06/23 10:30	KAC	EET SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCBLUE		1			618151	06/28/23 20:46	FLC	EET SL
Total/NA	Prep	PrecSep_0			992.29 mL	1.0 g	614558	06/06/23 10:34	KAC	EET SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCPURPLE	Ē.,,,,,,,	1		-	617518	06/23/23 11:52	FLC	EET SL
Total/NA	Analysis Instrumen	Ra226_Ra228 it ID: NOEQUIP		1			618364	06/29/23 16:50	SCB	EET SL

Laboratory References:

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

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-157134-1 SDG: FB Cully West

Analyst References:

Lab: EET CLE

Batch Type: Prep

BN = Benjamin Norman

MRL = Matthew Loeb

Batch Type: Analysis

DSH = David Heakin

KLC = Karen Counts

MRL = Matthew Loeb

RKT = Roger Toth

Lab: EET PIT

Batch Type: Analysis

BAB = Brooke Batyi

LWM = Leslie McIntire

SNL = Sean Lordo

Lab: EET SL

Batch Type: Prep

KAC = Kevin Cox

Batch Type: Analysis

FLC = Fernando Cruz

SCB = Sarah Bernsen

pH (SW846 EPA 9040C)

Job ID: 180-157134-1 SDG: FB Cully West

Lab Sample ID: 180-157134-1

Matrix: Water

Client Sample ID: CCR-AP-7
Date Collected: 05/22/23 11:20
Date Received: 05/25/23 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35		1.0	0.71	mg/L			05/27/23 14:15	1
Fluoride	0.49		0.10	0.026	mg/L			05/30/23 13:48	1
Sulfate	110		1.0	0.76	mg/L			05/27/23 14:15	1
Method: SW846 6010	DD - Metals (ICP) - To	tal Recovera	able						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		100	57	ug/L		06/05/23 14:00	06/06/23 16:24	1

Method: SW846 60208 Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0040	J	0.0050	0.00075	mg/L		06/05/23 14:00	06/06/23 22:39	1
Barium	0.11		0.0050	0.0022	mg/L		06/05/23 14:00	06/06/23 22:39	1
Beryllium	ND		0.0010	0.00062	mg/L		06/05/23 14:00	06/07/23 18:19	1
Cadmium	ND		0.0010	0.00020	mg/L		06/05/23 14:00	06/06/23 22:39	1
Calcium	120		1.0	0.25	mg/L		06/05/23 14:00	06/06/23 22:39	1
Chromium	ND		0.0050	0.0012	mg/L		06/05/23 14:00	06/06/23 22:39	1
Cobalt	0.00039	J	0.0010	0.00019	mg/L		06/05/23 14:00	06/06/23 22:39	1
Molybdenum	0.0018	J	0.0050	0.0011	mg/L		06/05/23 14:00	06/07/23 18:19	1
Lead	ND		0.0010	0.00045	mg/L		06/05/23 14:00	06/06/23 22:39	1
Antimony	ND		0.0020	0.00057	mg/L		06/05/23 14:00	06/06/23 22:39	1
Selenium	ND		0.0050	0.00089	mg/L		06/05/23 14:00	06/06/23 22:39	1
Thallium	ND		0.0010	0.00020	mg/L		06/05/23 14:00	06/06/23 22:39	1
_Lithium	0.010		0.0080	0.0017	mg/L		06/05/23 14:00	06/07/23 18:19	1

Wethod: 54464 /4/0A - Wercury	(CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		06/13/23 14:00	06/14/23 12:36	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	590		10	10	mg/L			05/26/23 19:19	1
Δnalyte	Result	Qualifier	RI	RI	Unit	D	Prenared	Analyzed	Dil Fac

0.1

7.3 HF

0.1 SU

Method: SW846 9	9315 - Radiu	ım-226 (GI	FPC)							
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.269		0.117	0.120	1.00	0.134	pCi/L	06/06/23 10:30	06/28/23 20:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.1		30 - 110					06/06/23 10:30	06/28/23 20:45	1

Method: SW846 9	320 - Radiu	ım-228 (GF	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.495	U	0.449	0.452	1.00	0.720	pCi/L	06/06/23 10:34	06/23/23 11:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.1		30 - 110					06/06/23 10:34	06/23/23 11:49	1

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06/02/23 17:30

Client: Haley & Aldrich, Inc.

Date Received: 05/25/23 09:50

Job ID: 180-157134-1 Project/Site: CCR Groundwater Monitoring SDG: FB Cully West

Lab Sample ID: 180-157134-1

Client Sample ID: CCR-AP-7 Date Collected: 05/22/23 11:20 **Matrix: Water**

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

%Yield Qualifier Limits Prepared Analyzed Dil Fac Y Carrier 81.1 30 - 110 06/06/23 10:34 06/23/23 11:49

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

Count Total Uncert. Uncert.

Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Analyte Prepared Analyzed Dil Fac **Combined Radium** 0.464 0.468 5.00 0.720 pCi/L 06/29/23 16:50 0.764

226 + 228

Client Sample ID: WAP 7D Lab Sample ID: 180-157134-2

Date Collected: 05/22/23 14:30 **Matrix: Water**

Date Received: 05/25/23 09:50

Method: SW846 EPA 9056A - Anions, Ion Chromatography Analyte Result Qualifier RL **MDL** Unit D

Analyzed Dil Fac Prepared 2.5 05/27/23 15:00 Chloride 150 1.8 mg/L 2.5 **Fluoride** 0.40 0.25 0.065 mg/L 05/30/23 14:32 2.5 05/27/23 15:00 2.5 1.9 mg/L 2.5 **Sulfate** 1100

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

Analyte Result Qualifier RL MDL Unit **Prepared** Analyzed Dil Fac 12000 500 290 ug/L 06/13/23 14:00 06/14/23 17:51 **Boron**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0011	J	0.0050	0.00075	mg/L		06/13/23 14:00	06/14/23 19:55	1
Barium	0.031		0.0050	0.0022	mg/L		06/13/23 14:00	06/14/23 19:55	1
Beryllium	ND	^+	0.0010	0.00062	mg/L		06/13/23 14:00	06/14/23 19:55	1
Cadmium	ND		0.0010	0.00020	mg/L		06/13/23 14:00	06/14/23 19:55	1
Calcium	380		1.0	0.25	mg/L		06/13/23 14:00	06/14/23 19:55	1
Chromium	ND		0.0050	0.0012	mg/L		06/13/23 14:00	06/14/23 19:55	1
Cobalt	0.0032		0.0010	0.00019	mg/L		06/13/23 14:00	06/14/23 19:55	1
Molybdenum	0.20		0.0050	0.0011	mg/L		06/13/23 14:00	06/14/23 19:55	1
Lead	ND		0.0010	0.00045	mg/L		06/13/23 14:00	06/14/23 19:55	1
Antimony	ND		0.0020	0.00057	mg/L		06/13/23 14:00	06/14/23 19:55	1
Selenium	ND		0.0050	0.00089	mg/L		06/13/23 14:00	06/14/23 19:55	1
Thallium	ND		0.0010	0.00020	mg/L		06/13/23 14:00	06/14/23 19:55	1
Lithium	0.063		0.0080	0.0017	mg/L		06/13/23 14:00	06/14/23 19:55	1

Method: SW846 7470A - Mercury (CVAA)

Analyte RL Result Qualifier **MDL** Unit **Prepared** Analyzed Dil Fac 0.20 Mercury ND 0.13 ug/L 06/13/23 14:00 06/14/23 12:47

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1900		10	10	mg/L			05/26/23 19:19	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

SDG: FB Cully West Lab Sample ID: 180-157134-2

Matrix: Water

Job ID: 180-157134-1

Client Sample ID: WAP 7D Date Collected: 05/22/23 14:30

Date Received: 05/25/23 09:50

Method: SW846	9315 - Radiu	ım-226 (GI	FPC)							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.414		0.150	0.155	1.00	0.163	pCi/L	06/06/23 10:30	06/28/23 20:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		30 - 110					06/06/23 10:30	06/28/23 20:45	1

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.925		0.445	0.453	1.00	0.609	pCi/L	06/06/23 10:34	06/23/23 11:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.2		30 - 110					06/06/23 10:34	06/23/23 11:51	1
Y Carrier	80.4		30 - 110					06/06/23 10:34	06/23/23 11:51	1

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	um-226 ar	nd Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.34		0.470	0.479	5.00	0.609	pCi/L		06/29/23 16:50	1

Client Sample ID: WAP 7S Lab Sample ID: 180-157134-3 Date Collected: 05/22/23 13:20 **Matrix: Water** Date Received: 05/25/23 09:50

Analyte	Result Quali	fier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	90	1.0	0.71	mg/L			05/27/23 15:14	1
Fluoride	0.13	0.10	0.026	mg/L			05/30/23 14:46	1
Sulfate	470	1.0	0.76	mg/L			05/27/23 15:14	1

Method: SW846 6010D - Metals (I	CP) - To	tal Recovera	ıble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	15000		500	290	ug/L		06/13/23 14:00	06/14/23 17:56	5
Method: SW846 6020B - Metals (CP/MS)	- Total Reco	verable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Method: SW846 6020B	Metals (ICP/MS)	- Total Rec	overable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0057		0.0050	0.00075	mg/L		06/13/23 14:00	06/14/23 19:57	1
Barium	0.050		0.0050	0.0022	mg/L		06/13/23 14:00	06/14/23 19:57	1
Beryllium	ND	^+	0.0010	0.00062	mg/L		06/13/23 14:00	06/14/23 19:57	1
Cadmium	ND		0.0010	0.00020	mg/L		06/13/23 14:00	06/14/23 19:57	1
Calcium	210		1.0	0.25	mg/L		06/13/23 14:00	06/14/23 19:57	1
Chromium	ND		0.0050	0.0012	mg/L		06/13/23 14:00	06/14/23 19:57	1
Cobalt	ND		0.0010	0.00019	mg/L		06/13/23 14:00	06/14/23 19:57	1
Molybdenum	0.27		0.0050	0.0011	mg/L		06/13/23 14:00	06/14/23 19:57	1
Lead	ND		0.0010	0.00045	mg/L		06/13/23 14:00	06/14/23 19:57	1
Antimony	0.0013	J	0.0020	0.00057	mg/L		06/13/23 14:00	06/14/23 19:57	1
Selenium	0.0034	J	0.0050	0.00089	mg/L		06/13/23 14:00	06/14/23 19:57	1
Thallium	ND		0.0010	0.00020	mg/L		06/13/23 14:00	06/14/23 19:57	1

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Job ID: 180-157134-1 SDG: FB Cully West

Client Sample ID: WAP 7S Lab Sample ID: 180-157134-3 Date Collected: 05/22/23 13:20

Matrix: Water

Date Received: 05/25/23 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.20		0.0080	0.0017	mg/L		06/13/23 14:00	06/14/23 19:57	1
Method: SW846 7470A - Mercury	(CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.13	ug/L		06/13/23 14:00	06/14/23 12:49	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	960		10	10	mg/L			05/26/23 19:19	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 EPA 9040C)	9.9	HE	0.1	0.1	SU			06/02/23 17:23	1

Method: SW846 93	15 - Radiu	ım-226 (GI	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0466	U	0.0799	0.0800	1.00	0.140	pCi/L	06/06/23 10:30	06/28/23 20:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		30 - 110					06/06/23 10:30	06/28/23 20:45	1

Method: SW846	9320 - Radiu	ım-228 (GI	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.148	U	0.316	0.316	1.00	0.552	pCi/L	06/06/23 10:34	06/23/23 11:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		30 - 110					06/06/23 10:34	06/23/23 11:51	1
Y Carrier	78.5		30 - 110					06/06/23 10:34	06/23/23 11:51	1

Method: TAL-STL R	a226_Ra	228 - Com	bined Radi	um-226 an	d Radiur	n-228				
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.194	U	0.326	0.326	5.00	0.552	pCi/L		06/29/23 16:50	1

Lab Sample ID: 180-157134-4 **Client Sample ID: WAP 2R** Date Collected: 05/22/23 15:40 **Matrix: Water** Date Received: 05/25/23 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44		1.0	0.71	mg/L			05/27/23 15:29	1
Fluoride	0.29		0.10	0.026	mg/L			05/30/23 15:00	1
Sulfate	120		1.0	0.76	mg/L			05/27/23 15:29	1

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Ba Carrier

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

90.8

Client Sample ID: WAP 2R Date Collected: 05/22/23 15:40

Date Received: 05/25/23 09:50

Job ID: 180-157134-1 SDG: FB Cully West

Lab Sample ID: 180-157134-4

06/06/23 10:30 06/28/23 20:45

Matrix: Water

Analyte	Result	Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0011		0.0050	0.00075		=	06/05/23 14:00	06/06/23 22:52	1
Barium	0.043		0.0050	0.0022	J		06/05/23 14:00		1
Beryllium	ND		0.0010	0.00062	-		06/05/23 14:00		1
Cadmium	0.00037		0.0010	0.00020			06/05/23 14:00	06/06/23 22:52	1
Calcium	120		1.0		mg/L		06/05/23 14:00		1
Chromium	ND		0.0050	0.0012	•		06/05/23 14:00	06/06/23 22:52	1
Cobalt	0.0020		0.0010	0.00019			06/05/23 14:00	06/06/23 22:52	1
Molybdenum	0.077		0.0050	0.0011	J		06/05/23 14:00		1
Lead	ND		0.0010	0.00045	-		06/05/23 14:00	06/06/23 22:52	1
Antimony	0.0011		0.0020	0.00057			06/05/23 14:00	06/06/23 22:52	1
Selenium	0.0071		0.0050	0.00089	-		06/05/23 14:00	06/06/23 22:52	1
Thallium	0.00069	J	0.0010	0.00020	-			06/06/23 22:52	1
Lithium	0.025		0.0080	0.0017	ma/l		06/05/23 14:00	06/07/23 18:37	1
Analyte Mercury	ND	Qualifier			Unit ug/L	<u>D</u>	Prepared 06/09/23 14:00	Analyzed 06/10/23 14:11	Dil Fac
Mercury	ND		0.20	0.13	ug/L		06/09/23 14:00	06/10/23 14:11	1
General Chemistry						_			
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540)	C) 510		10	10	mg/L			05/26/23 19:19	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	
Allalyte							•	•	Dil Fac
pH (SW846 EPA 9040C)		HF	0.1	0.1	SU			06/02/23 17:20	Dil Fac
	7.2		0.1	0.1	SU		<u> </u>	06/02/23 17:20	
pH (SW846 EPA 9040C)	7.2		0.1	0.1	SU		<u> </u>	06/02/23 17:20	
pH (SW846 EPA 9040C)	7.2	C)		0.1	SU			06/02/23 17:20	
pH (SW846 EPA 9040C) Method: SW846 9315 - Radi	7.2	C) Count	Total		SU MDC Uni		Prepared	06/02/23 17:20 Analyzed	
pH (SW846 EPA 9040C) Method: SW846 9315 - Radi	7.2 um-226 (GFP	C) Count Uncert.	Total Uncert.	RL I			Prepared 06/06/23 10:30	Analyzed	1

Method: SW846 93	320 - Radiu	ım-228 (GF	FPC)							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.583	U	0.398	0.401	1.00	0.593	pCi/L	06/06/23 10:34	06/23/23 11:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.8		30 - 110					06/06/23 10:34	06/23/23 11:51	1
Y Carrier	78.5		30 - 110					06/06/23 10:34	06/23/23 11:51	1

30 - 110

Method: TAL-STL F	Ra226_Ra	228 - Com	bined Radi	ium-226 an	d Radiur	n-228				
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.669		0.411	0.414	5.00	0.593	pCi/L	_	06/29/23 16:50	1

Carrier

Ba Carrier

%Yield Qualifier

94.9

Limits

30 - 110

Project/Site: CCR Groundwater Monitoring

SDG: FB Cully West

Job ID: 180-157134-1

Client Sample ID: FIELD BLANK Lab Sample ID: 180-157134-5

Date Collected: 05/22/23 13:20 Matrix: Water Date Received: 05/25/23 09:50

Method: SW846 EPA 908 Analyte		Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	ND	Quantier	1.0	0.71		_ =	Trepared	05/27/23 15:44	
Fluoride	ND		0.10	0.026	J			05/27/23 15:44	
Sulfate	ND		1.0		mg/L			05/27/23 15:44	
Cunate	ND		1.0	0.70	mg/L			00/21/20 10.44	
Method: SW846 6010D -	Metals (ICP) - To	tal Recov	verable						
Analyte		Qualifier	RL_		Unit	_ D	Prepared	Analyzed	Dil Fa
Boron	ND		100	57	ug/L		06/05/23 14:00	06/06/23 16:57	
Method: SW846 6020B -	Motale (ICD/MS)	- Total Po	coverable						
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Arsenic	ND		0.0050	0.00075		_ <u>-</u>	06/05/23 14:00	06/06/23 22:54	
Barium	0.0063		0.0050	0.0022	-		06/05/23 14:00	06/06/23 22:54	
Beryllium	ND		0.0010	0.00062	-		06/05/23 14:00	06/07/23 18:40	
Cadmium	ND		0.0010	0.00020			06/05/23 14:00	06/06/23 22:54	
Calcium	1.8		1.0		mg/L		06/05/23 14:00	06/06/23 22:54	
Chromium	0.0015	J.	0.0050	0.0012	-		06/05/23 14:00	06/06/23 22:54	
Cobalt	ND		0.0010	0.00019			06/05/23 14:00	06/06/23 22:54	
Molybdenum	ND		0.0050	0.0011	mg/L		06/05/23 14:00	06/07/23 18:40	
Lead	0.00067	1	0.0010	0.00045	J		06/05/23 14:00	06/06/23 22:54	
Antimony	ND		0.0020	0.00057			06/05/23 14:00	06/06/23 22:54	
Selenium	ND		0.0050	0.00089	J		06/05/23 14:00	06/06/23 22:54	
Thallium	0.00022	1	0.0010	0.00020	ū		06/05/23 14:00	06/06/23 22:54	
Lithium	ND		0.0080	0.0017				06/07/23 18:40	
	, no		0.0000	0.0011	9/ _		00/00/20 11:00	00/01/20 10.10	
Method: SW846 7470A -	Mercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Mercury	ND		0.20	0.13	ug/L		06/09/23 14:00	06/10/23 14:18	
General Chemistry Analyte	Result	Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids (SM 2			10		mg/L	_ =		05/26/23 19:19	Diria
		Qualifier	RL	RL	-	ь.	Branarad		Dil Fa
Analyte			0.1	0.1	SU	_ D	Prepared	Analyzed 06/02/23 17:17	
pH (SW846 EPA 9040C)	9.4	HF	0.1	0.1	50			06/02/23 17:17	
Method: SW846 9315 - F	Radium-226 (GFP	C)							
	•	Count	Total						
		Uncert.	Uncert.						
A a l4 a	esult Qualifier	(2σ+/-)	(2σ+/-)	RL I	MDC Unit		Prepared	Analyzed	Dil Fa
Analyte R		0.0810	0.0810	1.00 0	.157 pCi/L		06/06/23 10:30	06/28/23 20:46	-
	.0122 U								D" =-
Radium-226 0		Limita					Dranarad	Apolyzad	
Radium-226 0 Carrier %	Yield Qualifier	Limits					Prepared 06/06/22 10:20	Analyzed	Dil Fa
Radium-226 0 Carrier %		Limits 30 - 110					Prepared 06/06/23 10:30	Analyzed 06/28/23 20:46	DII Fa
Radium-226 0 Carrier % Ba Carrier	Yield Qualifier	30 - 110							
Radium-226 0 Carrier % Ba Carrier	Yield Qualifier	30 - 110	Total						
Radium-226 0 Carrier % Ba Carrier	Yield Qualifier	30 - 110 C)	Total Uncert.						
Radium-226 0 Carrier % Ba Carrier Method: SW846 9320 - F	Yield Qualifier	30 - 110 C) Count		RL I	MDC Unit				Dil Fa

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Analyzed

06/06/23 10:34 06/23/23 11:52

Prepared

Dil Fac

Client Sample Results

Client: Haley & Aldrich, Inc.

Job ID: 180-157134-1 Project/Site: CCR Groundwater Monitoring SDG: FB Cully West

Client Sample ID: FIELD BLANK

Lab Sample ID: 180-157134-5 Date Collected: 05/22/23 13:20 **Matrix: Water** Date Received: 05/25/23 09:50

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

%Yield Qualifier Limits Prepared Analyzed Dil Fac Y Carrier 82.2 30 - 110 06/06/23 10:34 06/23/23 11:52

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

Count Total Uncert. Uncert.

Result Qualifier (2σ+/-) Dil Fac Analyte $(2\sigma + / -)$ RLMDC Unit Prepared Analyzed Combined Radium 226 0.183 U 0.344 0.344 5.00 0.577 pCi/L 06/29/23 16:50

+ 228

Client: Haley & Aldrich, Inc.

Job ID: 180-157134-1 SDG: FB Cully West Project/Site: CCR Groundwater Monitoring

Method: EPA 9056A - Anions, Ion Chromatography

ND

Lab Sample ID: MB 180-436380/6

Matrix: Water

Analyte

Chloride

Fluoride

Sulfate

Analysis Batch: 436380

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

05/27/23 11:55

MB MB Result Qualifier RL **MDL** Unit Dil Fac D Prepared Analyzed ND 1.0 0.71 mg/L 05/27/23 11:55 0.026 mg/L ND 0.10 05/27/23 11:55

0.76 mg/L

Lab Sample ID: LCS 180-436380/7

Matrix: Water

Analysis Batch: 436380

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

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	50.2		mg/L		100	80 - 120	
Fluoride	2.50	2.61		mg/L		104	80 - 120	
Sulfate	50.0	50.6		mg/L		101	80 - 120	

1.0

Lab Sample ID: 180-157134-1 MS

Matrix: Water

Analysis Batch: 436380

Client Sample ID: CCR-AP-7 **Prep Type: Total/NA**

Client Sample ID: CCR-AP-7

Prep Type: Total/NA

Sample Sample Spike MS MS %Rec Result Qualifier Result Qualifier Unit Analyte Added D %Rec Limits Chloride 35 50.0 85.8 mg/L 101 80 - 120 Fluoride 0.58 2.50 3.17 mg/L 104 80 - 120 50.0 Sulfate 110 156 mg/L 96 80 - 120

Lab Sample ID: 180-157134-1 MSD

Matrix: Water

Analysis Batch: 436380

,	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	35		50.0	82.7		mg/L		95	80 - 120	4	15	
Fluoride	0.58		2.50	3.04		mg/L		98	80 - 120	4	15	
Sulfate	110		50.0	150		ma/L		84	80 - 120	4	15	

Lab Sample ID: MB 180-436477/6

Matrix: Water

Analysis Batch: 436477

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

Client Sample ID: Lab Control Sample

MB MB Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac 0.71 mg/L Chloride ND 1.0 05/30/23 13:18 Fluoride ND 0.10 0.026 mg/L 05/30/23 13:18 Sulfate ND 0.76 mg/L 05/30/23 13:18 1.0

Lab Sample ID: LCS 180-436477/7

Matrix: Water

Analysis Batch: 436477

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	50.9		mg/L		102	80 - 120	
Fluoride	2.50	2.72		mg/L		109	80 - 120	
Sulfate	50.0	50.9		mg/L		102	80 - 120	

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6/29/2023

Prep Type: Total/NA

Client: Haley & Aldrich, Inc.

Job ID: 180-157134-1 SDG: FB Cully West Project/Site: CCR Groundwater Monitoring

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-575955/1-A

Matrix: Water

Analysis Batch: 576189

Client Sample ID: Method Blank **Prep Type: Total Recoverable Prep Batch: 575955**

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte Prepared 100 06/05/23 14:00 06/06/23 16:16 Boron ND 57 ug/L

Lab Sample ID: LCS 240-575955/2-A

Matrix: Water

Analyte

Boron

Boron

Boron

Analysis Batch: 576189

Spike Added 1000

1120

LCS LCS Result Qualifier

Unit ug/L

D %Rec 112

80 - 120

Client Sample ID: CCR-AP-7

Prep Type: Total Recoverable

Prep Type: Total Recoverable

%Rec

Limits

Prep Type: Total Recoverable

Prep Batch: 575955

Prep Batch: 575955

Client Sample ID: Lab Control Sample

Lab Sample ID: 180-157134-1 MS

Matrix: Water

Analysis Batch: 576189

Analyte

Sample Sample Result Qualifier ND

Spike Added 1000

1170

Result Qualifier

MS MS

Unit ug/L

%Rec

75 - 125

Limits

%Rec

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Analyzed

%Rec

Lab Sample ID: 180-157134-1 MSD **Client Sample ID: CCR-AP-7**

Matrix: Water

Analysis Batch: 576189

Analyte

Sample Sample Result Qualifier

ND

Spike Added 1000

RL

100

Result Qualifier 1190

MSD MSD

Unit ug/L

%Rec

Prepared

Limits **RPD** Limit 75 - 125

Prep Batch: 576981

Prep Batch: 575955

Lab Sample ID: MB 240-576981/1-A

Matrix: Water

Analysis Batch: 577186

MR MR

Analyte

Result Qualifier Boron ND

Lab Sample ID: LCS 240-576981/2-A

Matrix: Water Analysis Batch: 577186

Analyte Boron

Spike

Added

1000

LCS LCS Result Qualifier 1040

MDL Unit

57 ug/L

Unit ug/L

D %Rec 104 Limits

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-575955/1-A

Matrix: Water

Analysis Batch: 576217

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

Prep Batch: 575955

M	3 MB							
Analyte Resu	lt Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic N	<u> </u>	0.0050	0.00075	mg/L		06/05/23 14:00	06/06/23 22:28	1
Barium N)	0.0050	0.0022	mg/L		06/05/23 14:00	06/06/23 22:28	1
Cadmium)	0.0010	0.00020	mg/L		06/05/23 14:00	06/06/23 22:28	1
Calcium N)	1.0	0.25	mg/L		06/05/23 14:00	06/06/23 22:28	1
Chromium)	0.0050	0.0012	mg/L		06/05/23 14:00	06/06/23 22:28	1
Cobalt)	0.0010	0.00019	mg/L		06/05/23 14:00	06/06/23 22:28	1

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RPD

06/13/23 14:00 06/14/23 15:03

Dil Fac

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 576981

Job ID: 180-157134-1

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

Method: 6020B - Metals (ICP/MS) (Continued)

MB MB

Lab Sample ID: MB 240-575955/1-A

Matrix: Water

Analysis Batch: 576217

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

Prep Batch: 575955

Analyte	Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0010	0.00045	mg/L		06/05/23 14:00	06/06/23 22:28	1
Antimony	ND		0.0020	0.00057	mg/L		06/05/23 14:00	06/06/23 22:28	1
Selenium	ND		0.0050	0.00089	mg/L		06/05/23 14:00	06/06/23 22:28	1
Thallium	ND		0.0010	0.00020	mg/L		06/05/23 14:00	06/06/23 22:28	1

Lab Sample ID: MB 240-575955/1-A

Matrix: Water

Analysis Batch: 576385

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 575955

MB MB **MDL** Unit Analyte Result Qualifier RL D Analyzed Dil Fac Prepared Beryllium ND 0.0010 0.00062 mg/L 06/05/23 14:00 06/07/23 18:14 Molybdenum ND 0.0050 0.0011 mg/L 06/05/23 14:00 06/07/23 18:14 1 Lithium ND 0.0080 0.0017 mg/L 06/05/23 14:00 06/07/23 18:14

Lab Sample ID: LCS 240-575955/3-A

Matrix: Water

Analysis Batch: 576217

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

Prep Batch: 575955

Spike LCS LCS %Rec **Analyte** Added Result Qualifier Limits Unit D %Rec Arsenic 1.00 0.991 99 80 - 120 mg/L Barium 1.00 0.950 mg/L 95 80 - 120 Cadmium 0.500 0.467 mg/L 93 80 - 120Calcium 25.0 24.7 99 80 - 120 mg/L Chromium 0.500 0.446 89 80 - 120 mg/L Cobalt 0.500 0.509 mg/L 102 80 - 120 Lead 0.500 0.485 mg/L 97 80 - 120 0.100 0.102 102 80 - 120 Antimony mg/L Selenium 1.00 0.962 mg/L 96 80 - 120 Thallium 1.00 0.908 mg/L 80 - 120

Lab Sample ID: LCS 240-575955/3-A

Matrix: Water

Analysis Batch: 576385

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

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Beryllium	0.500	0.502		mg/L		100	80 - 120	
Molybdenum	0.500	0.492		mg/L		98	80 - 120	
Lithium	0.500	0.498		mg/L		100	80 - 120	

Lab Sample ID: 180-157134-1 MS

Matrix: Water

Analysis Batch: 576217

Client Sample ID: CCR-AP-7 **Prep Type: Total Recoverable Prep Batch: 575955**

inaly old Datolli of Coli									op Datom e	
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Arsenic	0.0040	J	1.00	0.998		mg/L		99	80 - 120	
Barium	0.11		1.00	1.05		mg/L		94	80 - 120	
Cadmium	ND		0.500	0.460		mg/L		92	80 - 120	
Calcium	120		25.0	137	4	mg/L		74	80 - 120	
Chromium	ND		0.500	0.446		mg/L		89	80 - 120	
Cobalt	0.00039	J	0.500	0.501		mg/L		100	80 - 120	

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Prep Batch: 575955

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

SDG: FB Cully West

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-157134-1 MS

Matrix: Water

Analysis Batch: 576217

Client Sample ID: CCR-AP-7 Prep Type: Total Recoverable

Prep Batch: 575955

Job ID: 180-157134-1

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Lead	ND		0.500	0.468		mg/L		94	80 - 120		
Antimony	ND		0.100	0.104		mg/L		104	80 - 120		
Selenium	ND		1.00	0.957		mg/L		96	80 - 120		
Thallium	ND		1.00	0.881		mg/L		88	80 - 120		

Lab Sample ID: 180-157134-1 MS

Matrix: Water

Analysis Batch: 576385

Client Sample ID: CCR-AP-7 Prep Type: Total Recoverable Prep Batch: 575955

,										
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Beryllium	ND		0.500	0.490		mg/L		98	80 - 120	
Molybdenum	0.0018	J	0.500	0.490		mg/L		98	80 - 120	
Lithium	0.010		0.500	0.496		mg/L		97	80 - 120	

Lab Sample ID: 180-157134-1 MSD

Matrix: Water

Analysis Batch: 576217

Client Sample ID: CCR-AP-7 **Prep Type: Total Recoverable**

Prep Batch: 575955

inaly old Datom Crozm											
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.0040	J	1.00	1.02		mg/L		102	80 - 120	3	20
Barium	0.11		1.00	1.09		mg/L		98	80 - 120	4	20
Cadmium	ND		0.500	0.477		mg/L		95	80 - 120	3	20
Calcium	120		25.0	140	4	mg/L		86	80 - 120	2	20
Chromium	ND		0.500	0.465		mg/L		93	80 - 120	4	20
Cobalt	0.00039	J	0.500	0.513		mg/L		103	80 - 120	2	20
Lead	ND		0.500	0.488		mg/L		98	80 - 120	4	20
Antimony	ND		0.100	0.109		mg/L		109	80 - 120	5	20
Selenium	ND		1.00	0.981		mg/L		98	80 - 120	2	20
Thallium	ND		1.00	0.918		mg/L		92	80 - 120	4	20

Lab Sample ID: 180-157134-1 MSD

Matrix: Water

Analysis Batch: 576385

Client Sample ID: CCR-AP-7 **Prep Type: Total Recoverable** Prep Batch: 575955

Analysis Baton, or occo									i icp b	atom. o	0000
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Beryllium	ND		0.500	0.499		mg/L		100	80 - 120	2	20
Molybdenum	0.0018	J	0.500	0.512		mg/L		102	80 - 120	4	20
Lithium	0.010		0.500	0.504		mg/L		99	80 - 120	1	20

Lab Sample ID: MB 240-576981/1-A

Matrix: Water

Analysis Batch: 577260

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 576981

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.00075	mg/L		06/13/23 14:00	06/14/23 18:35	1
Barium	ND		0.0050	0.0022	mg/L		06/13/23 14:00	06/14/23 18:35	1
Beryllium	ND	^+	0.0010	0.00062	mg/L		06/13/23 14:00	06/14/23 18:35	1
Cadmium	ND		0.0010	0.00020	mg/L		06/13/23 14:00	06/14/23 18:35	1
Calcium	ND		1.0	0.25	mg/L		06/13/23 14:00	06/14/23 18:35	1
Chromium	ND		0.0050	0.0012	mg/L		06/13/23 14:00	06/14/23 18:35	1

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Job ID: 180-157134-1

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

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 240-576981/1-A

Matrix: Water

Analysis Batch: 577260

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

Prep Batch: 576981

Dil Fac
1
1
1
1
1
1
1

Lab Sample ID: LCS 240-576981/27-A

Matrix: Water

Analysis Batch: 577260

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

Prep Batch: 576981

Analysis Batch. 377200	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Arsenic	1.00	0.906		mg/L		91	80 - 120
Barium	1.00	0.945		mg/L		95	80 - 120
Beryllium	0.500	0.524	^+	mg/L		105	80 - 120
Cadmium	0.500	0.479		mg/L		96	80 - 120
Calcium	25.0	24.1		mg/L		97	80 - 120
Chromium	0.500	0.483		mg/L		97	80 - 120
Cobalt	0.500	0.472		mg/L		94	80 - 120
Molybdenum	0.500	0.473		mg/L		95	80 - 120
Lead	0.500	0.491		mg/L		98	80 - 120
Antimony	0.100	0.104		mg/L		104	80 - 120
Selenium	1.00	0.921		mg/L		92	80 - 120
Thallium	1.00	0.951		mg/L		95	80 - 120
Lithium	0.500	0.499		mg/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-576649/1-A

Lab Sample ID: LCS 240-576649/2-A

Matrix: Water

Matrix: Water

Analysis Batch: 576802

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

Analyzed

Prep Batch: 576649

Dil Fac

MB MB

Analyte Result Qualifier RL MDL Unit Mercury 0.161 J 0.20 0.13 ug/L

ND

Prepared 06/09/23 14:00 06/10/23 13:09

Client Sample ID: Lab Control Sample

Prep Type: Total/NA **Prep Batch: 576649**

Analysis Batch: 576802 Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits ug/L 5.00 4.93 99 80 - 120 Mercury

Lab Sample ID: MB 240-576992/1-A

Matrix: Water

Analyte

Mercury

Analysis Batch: 577182

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

06/13/23 14:00 06/14/23 12:32

Prep Batch: 576992

MB MB Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac

0.13 ug/L

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0.20

10

10

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: LCS 240-576992/2-A

Job ID: 180-157134-1 SDG: FB Cully West

Method: 7470A - Mercury (CVAA) (Continued)

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

80 - 120

Client Sample ID: Lab Control Sample

103

Matrix: Water Analysis Batch: 577182 Prep Batch: 576992 Spike LCS LCS %Rec

Result Qualifier Added Limits Analyte Unit %Rec Mercury 5.00 4.03 ug/L 81 80 - 120

Lab Sample ID: 180-157134-1 MS Client Sample ID: CCR-AP-7

Matrix: Water

Prep Type: Total/NA **Analysis Batch: 577182 Prep Batch: 576992**

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier D %Rec Limits Analyte Unit

1.00

Lab Sample ID: 180-157134-1 MSD Client Sample ID: CCR-AP-7

1.03

ug/L

Matrix: Water

Mercury

Prep Type: Total/NA Analysis Batch: 577182

Prep Batch: 576992 Spike MSD MSD %Rec **RPD** Sample Sample Result Qualifier Limits RPD Analyte Added Result Qualifier Unit %Rec Limit Mercury ND 1.00 0.890 89 80 - 120 15 20 ug/L

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-436894/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 436894

LCS LCS Spike %Rec **Analyte** Added Result Qualifier Unit %Rec Limits 7.00 7.0 SU 100 99 - 101

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

ND

Lab Sample ID: MB 180-436369/1 Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 436369

MB MB

Analyte Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac **Total Dissolved Solids** ND 10 05/26/23 19:19

Lab Sample ID: LCS 180-436369/2

Matrix: Water Analysis Batch: 436369

Spike LCS LCS %Rec Added Result Qualifier Unit %Rec Limits Total Dissolved Solids 580 598 mg/L 103 85 - 115

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-614557/1-A Client Sample ID: Method Blank

Matrix: Water

Analysis Batch: 618150

Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 -0.01728 U 0.0814 0.0814 1.00 0.166 pCi/L 06/06/23 10:30 06/28/23 18:19

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Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 614557

Job ID: 180-157134-1

Dil Fac

10

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

SDG: FB Cully West

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-614557/1-A

Matrix: Water

Analysis Batch: 618150

MB MB

%Yield Qualifier Limits Carrier Ba Carrier 94 1 30 - 110 Client Sample ID: Method Blank

Analyzed

Prep Type: Total/NA

Prep Batch: 614557

06/06/23 10:30 06/28/23 18:19

Lab Sample ID: LCS 160-614557/2-A

Matrix: Water

Analysis Batch: 618150

Client Sample ID: Lab Control Sample

Prepared

Prep Type: Total/NA

Prep Batch: 614557

Total

LCS LCS %Rec **Spike** Uncert. Analyte Added Result Qual $(2\sigma + / -)$ RL**MDC** Unit %Rec Limits Radium-226 11.3 9.867 1.07 1.00 0.138 pCi/L 87 75 - 125

LCS LCS

Carrier %Yield Qualifier Limits Ba Carrier 89.3 30 - 110

Client Sample ID: CCR-AP-7

Prep Type: Total/NA

Prep Batch: 614557

Lab Sample ID: 180-157134-1 DU

Matrix: Water

Analyte

Radium-226

Analysis Batch: 618151

DU DU Sample Sample

Result Qual

0.3571

Total

0.141

Uncert. $(2\sigma + / -)$ RL **MDC** Unit

1.00

0.151 pCi/L

RER RER

0.34

Limit

DU DU

Carrier %Yield Qualifier Limits Ba Carrier 88.7 30 - 110

0.269

Result Qual

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-614558/1-A

Matrix: Water

Analysis Batch: 617527

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 614558

Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-228 0.5210 U 0.361 0.364 1.00 0.544 pCi/L 06/06/23 10:34 06/23/23 11:47

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 94.1 30 - 110 06/06/23 10:34 06/23/23 11:47 30 - 110 06/06/23 10:34 06/23/23 11:47 Y Carrier 84.5

Lab Sample ID: LCS 160-614558/2-A

MB MB

Matrix: Water

Analysis Batch: 617527

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 614558

Total Spike LCS LCS %Rec Uncert. Analyte Added Result Qual $(2\sigma + / -)$ RL MDC Unit %Rec Limits Radium-228 8.10 8.775 1.25 1.00 0.558 pCi/L 108 75 - 125

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QC Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-157134-1

Project/Site: CCR Groundwater Monitoring SDG: FB Cully West

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

Lab Sample ID: LCS 160-614558/2-A **Client Sample ID: Lab Control Sample Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 617527

LCS LCS

Carrier	%Yield	Qualifier	Limits
Ba Carrier	89.3		30 - 110
Y Carrier	83.0		30 - 110

Lab Sample ID: 180-157134-1 DU **Client Sample ID: CCR-AP-7**

Matrix: Water

Analysis Batch: 617518

Prep Type: Total/NA

Prep Batch: 614558

Prep Batch: 614558

Total DU DU Sample Sample Uncert. **RER** Analyte Result Qual Result Qual $(2\sigma + / -)$ RL **MDC** Unit RER Limit Radium-228 0.495 U 0.3757 U 0.374 1.00 0.599 pCi/L 0.15

DU DU

Carrier	%Yield	Qualifier	Limits
Ba Carrier	88.7		30 - 110
Y Carrier	83.0		30 - 110

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6/29/2023

Client: Haley & Aldrich, Inc.

Job ID: 180-157134-1 Project/Site: CCR Groundwater Monitoring SDG: FB Cully West

HPLC/IC

Analysis Batch: 436380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total/NA	Water	EPA 9056A	
180-157134-2	WAP 7D	Total/NA	Water	EPA 9056A	
180-157134-3	WAP 7S	Total/NA	Water	EPA 9056A	
180-157134-4	WAP 2R	Total/NA	Water	EPA 9056A	
180-157134-5	FIELD BLANK	Total/NA	Water	EPA 9056A	
MB 180-436380/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-436380/7	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-157134-1 MS	CCR-AP-7	Total/NA	Water	EPA 9056A	
180-157134-1 MSD	CCR-AP-7	Total/NA	Water	EPA 9056A	

Analysis Batch: 436477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total/NA	Water	EPA 9056A	
180-157134-2	WAP 7D	Total/NA	Water	EPA 9056A	
180-157134-3	WAP 7S	Total/NA	Water	EPA 9056A	
180-157134-4	WAP 2R	Total/NA	Water	EPA 9056A	
MB 180-436477/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-436477/7	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 575955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total Recoverable	Water	3005A	
180-157134-4	WAP 2R	Total Recoverable	Water	3005A	
180-157134-5	FIELD BLANK	Total Recoverable	Water	3005A	
MB 240-575955/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-575955/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-575955/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-157134-1 MS	CCR-AP-7	Total Recoverable	Water	3005A	
180-157134-1 MS	CCR-AP-7	Total Recoverable	Water	3005A	
180-157134-1 MSD	CCR-AP-7	Total Recoverable	Water	3005A	
180-157134-1 MSD	CCR-AP-7	Total Recoverable	Water	3005A	

Analysis Batch: 576189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total Recoverable	Water	6010D	575955
180-157134-4	WAP 2R	Total Recoverable	Water	6010D	575955
180-157134-5	FIELD BLANK	Total Recoverable	Water	6010D	575955
MB 240-575955/1-A	Method Blank	Total Recoverable	Water	6010D	575955
LCS 240-575955/2-A	Lab Control Sample	Total Recoverable	Water	6010D	575955
180-157134-1 MS	CCR-AP-7	Total Recoverable	Water	6010D	575955
180-157134-1 MSD	CCR-AP-7	Total Recoverable	Water	6010D	575955

Analysis Batch: 576217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total Recoverable	Water	6020B	575955
180-157134-4	WAP 2R	Total Recoverable	Water	6020B	575955
180-157134-5	FIELD BLANK	Total Recoverable	Water	6020B	575955
MB 240-575955/1-A	Method Blank	Total Recoverable	Water	6020B	575955
LCS 240-575955/3-A	Lab Control Sample	Total Recoverable	Water	6020B	575955

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Client: Haley & Aldrich, Inc.

Job ID: 180-157134-1 Project/Site: CCR Groundwater Monitoring SDG: FB Cully West

Metals (Continued)

Analysis Batch: 576217 (Continued)

	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
	180-157134-1 MS	CCR-AP-7	Total Recoverable	Water	6020B	575955
İ	180-157134-1 MSD	CCR-AP-7	Total Recoverable	Water	6020B	575955

Analysis Batch: 576385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total Recoverable	Water	6020B	575955
180-157134-4	WAP 2R	Total Recoverable	Water	6020B	575955
180-157134-5	FIELD BLANK	Total Recoverable	Water	6020B	575955
MB 240-575955/1-A	Method Blank	Total Recoverable	Water	6020B	575955
LCS 240-575955/3-A	Lab Control Sample	Total Recoverable	Water	6020B	575955
180-157134-1 MS	CCR-AP-7	Total Recoverable	Water	6020B	575955
180-157134-1 MSD	CCR-AP-7	Total Recoverable	Water	6020B	575955

Prep Batch: 576649

Lab Sample ID 180-157134-4	Client Sample ID WAP 2R	Prep Type Total/NA	Matrix Water	Method 7470A	Prep Batch
180-157134-5	FIELD BLANK	Total/NA	Water	7470A	
MB 240-576649/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-576649/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 576802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-4	WAP 2R	Total/NA	Water	7470A	576649
180-157134-5	FIELD BLANK	Total/NA	Water	7470A	576649
MB 240-576649/1-A	Method Blank	Total/NA	Water	7470A	576649
LCS 240-576649/2-A	Lab Control Sample	Total/NA	Water	7470A	576649

Prep Batch: 576981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-2	WAP 7D	Total Recoverable	Water	3005A	
180-157134-3	WAP 7S	Total Recoverable	Water	3005A	
MB 240-576981/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-576981/27-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-576981/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 576992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total/NA	Water	7470A	<u> </u>
180-157134-2	WAP 7D	Total/NA	Water	7470A	
180-157134-3	WAP 7S	Total/NA	Water	7470A	
MB 240-576992/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-576992/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-157134-1 MS	CCR-AP-7	Total/NA	Water	7470A	
180-157134-1 MSD	CCR-AP-7	Total/NA	Water	7470A	

Analysis Batch: 577182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total/NA	Water	7470A	576992
180-157134-2	WAP 7D	Total/NA	Water	7470A	576992
180-157134-3	WAP 7S	Total/NA	Water	7470A	576992
MB 240-576992/1-A	Method Blank	Total/NA	Water	7470A	576992

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Metals (Continued)

Analysis Batch: 577182 (Continued)

	Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
ļi	LCS 240-576992/2-A	Lab Control Sample	Total/NA	Water	7470A	576992
	180-157134-1 MS	CCR-AP-7	Total/NA	Water	7470A	576992
	180-157134-1 MSD	CCR-AP-7	Total/NA	Water	7470A	576992

Analysis Batch: 577186

Lab Sample ID 180-157134-2	Client Sample ID WAP 7D	Prep Type Total Recoverable	Matrix Water	Method 6010D	Prep Batch 576981
180-157134-3	WAP 7S	Total Recoverable	Water	6010D	576981
MB 240-576981/1-A	Method Blank	Total Recoverable	Water	6010D	576981
LCS 240-576981/2-A	Lab Control Sample	Total Recoverable	Water	6010D	576981

Analysis Batch: 577260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-2	WAP 7D	Total Recoverable	Water	6020B	576981
180-157134-3	WAP 7S	Total Recoverable	Water	6020B	576981
MB 240-576981/1-A	Method Blank	Total Recoverable	Water	6020B	576981
LCS 240-576981/27-A	Lab Control Sample	Total Recoverable	Water	6020B	576981

General Chemistry

Analysis Batch: 436369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total/NA	Water	SM 2540C	
180-157134-2	WAP 7D	Total/NA	Water	SM 2540C	
180-157134-3	WAP 7S	Total/NA	Water	SM 2540C	
180-157134-4	WAP 2R	Total/NA	Water	SM 2540C	
180-157134-5	FIELD BLANK	Total/NA	Water	SM 2540C	
MB 180-436369/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-436369/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 436894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total/NA	Water	EPA 9040C	
180-157134-2	WAP 7D	Total/NA	Water	EPA 9040C	
180-157134-3	WAP 7S	Total/NA	Water	EPA 9040C	
180-157134-4	WAP 2R	Total/NA	Water	EPA 9040C	
180-157134-5	FIELD BLANK	Total/NA	Water	EPA 9040C	
LCS 180-436894/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 614557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total/NA	Water	PrecSep-21	
180-157134-2	WAP 7D	Total/NA	Water	PrecSep-21	
180-157134-3	WAP 7S	Total/NA	Water	PrecSep-21	
180-157134-4	WAP 2R	Total/NA	Water	PrecSep-21	
180-157134-5	FIELD BLANK	Total/NA	Water	PrecSep-21	
MB 160-614557/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-614557/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-157134-1 DU	CCR-AP-7	Total/NA	Water	PrecSep-21	

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2

Job ID: 180-157134-1

SDG: FB Cully West

6

0

9

4 4

10

12

Client: Haley & Aldrich, Inc. Project/Site: CCR Groundwater Monitoring Job ID: 180-157134-1 SDG: FB Cully West

Rad

Prep Batch: 614558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-157134-1	CCR-AP-7	Total/NA	Water	PrecSep_0	
180-157134-2	WAP 7D	Total/NA	Water	PrecSep_0	
180-157134-3	WAP 7S	Total/NA	Water	PrecSep_0	
180-157134-4	WAP 2R	Total/NA	Water	PrecSep_0	
180-157134-5	FIELD BLANK	Total/NA	Water	PrecSep_0	
MB 160-614558/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-614558/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-157134-1 DU	CCR-AP-7	Total/NA	Water	PrecSep_0	

Eurofins Pittsburgh

	143 823 03 60 22/18	02.80 22/18	ととと
Company	Received by:	Date/Time:	Company
	Cooler Temperature(s) °C and Other Remarks:		
			Ver: 06/08/20

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Phone: 412-963-7058_Fax: 412-963-2468	0	hain	of Cus	Chain of Custody Record	OSe	ē					346663		🔆 eurofins	INS Environment Testing
formation (Sub Contract Lab)	Sampler			Lab PM Hayes	Lab PM: Hayes, Ken					Carrie	Carrier Tracking No(s):		COC No: 180-487999.	1.1
Clent Contact: Shipping/Receiving	Phone			E-Mail: Ken.F	layes@	get.eu	E-Mail: Ken. Hayes@et.eurofinsus.com	moo:		State of C Indiana	State of Origin: Indiana		Page: Page 1 of 1	
Company. TestAmerica Laboratories, Inc.					Accredita	ations R	Accreditations Required (See note)	See note					Job #:	1
Address: 13715 Rider Trail North,	Due Date Requested 6/4/2023	ij.						Ana	lysis	Analysis Requested	hed		Preservation Codes:	Codes:
City. Earth City	TAT Requested (days):	:(3):			13 0 a								A - HCL B - NaOH C - Zn Acetate	
State, Ztp MO, 63045							151						D - Nitric Acid E - NaHSO4	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:				(0		ı ıəbu						G - Amchlor	
Email:	:*OM						SI DIBI							U - Acetone V - MCAA
Project Name: CCR Groundwater Monitoring	Project #: 18016014						nuese (K-EDTA L-EDA	w - pri 4-5 Y - Trizma Z - other (specify)
Site	:#MOSS												Other:	:
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (wwwater, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered S MSM mrorne	9315_Ra226/Pre	9320_Ra228IPre 9320_Ra228_GF						Total Number o	Special Instructions/Note:
	\bigvee	X	ו מי	Preservation Code:	X									
CCR-AP-7 (180-157134-1)	5/22/23	11:20 Eastern		Water		×	×	-					2	
CCR-AP-7 (180-157134-1DU)	5/22/23	11:20 Eastern	2	Water		×	×						4	
WAP 7D (180-157134-2)	5/22/23	14:30 Eastern		Water		×	×						2	
WAP 7S (180-157134-3)	5/22/23	13:20 Eastern		Water		×	×	-					2	
WAP 2R (180-157134-4)	5/22/23	15:40 Eastern		Water		×	×						2	
FIELD BLANK (180-157134-5)	5/22/23	13:20 Eastern		Water		×	×					3.00	2	
						\dashv							(h)	
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/lests/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.	aces the ownership of eing analyzed, the san signed Chain of Cust	method, analy oples must be ody attesting t	te & accredita shipped back o said complia	tion compliance to the Eurofins I ince to Eurofins	upon our Pittsburgh	subcor I labora h.	ntract labo tory or oth	oratories. ner instru	This sar ctions wil	nple shipme I be provide	nt is forwarded und d. Any changes to	er chain-of accreditatic	custody. If the lab	method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently miles 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 tody attesting to said compliance to Eurofins Pittsburgh.

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification

				campic proposal (a rec may be asset	described and a second of a second in samples are retained foriger trian 1 month,	month
	Unconfirmed			Return To Client Dispo	Disposal By Lab Archive For	Mor
	Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		Requi		
	Empty Kit Relinquished by:	Date	E	Time:	Method of Shipment:	
	6	Copperations: Copperation Research	Company	Received by: Fedex.	Date/Time:	Compa
6/2	fedex	Date/Time:	Company	n transition of Aman Pages A	Objectime: 1/22 08.70	Compa
29/2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Compar
023	Custody Seals Intact: Custody Seal No. Δ Yes. Δ No.			Cooler Temperature(s) °C and Other Remarks.		

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-157134-1

SDG Number: FB Cully West

Login Number: 157134 List Source: Eurofins Pittsburgh

List Number: 1

Creator: Abernathy, Eric L

Creator: Abernatny, Eric L		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	

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Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-157134-1

SDG Number: FB Cully West

Login Number: 157134 List Source: Eurofins St. Louis
List Number: 2 List Creation: 06/01/23 12:44 PM

Creator: Sharkey-Gonzalez, Briana L

Creator. Sharkey-Gonzalez, Briana L		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	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?	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	

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