

ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT 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 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 West Ash Pond (WAP) was operating under an assessment monitoring program in compliance with 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 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 WAP is operating under an assessment monitoring program; therefore, no statistical evaluations were conducted on Appendix III constituents in 2021/2022.

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 WAP to meet the requirements of 40 CFR § 257.95. The WAP remained in assessment monitoring during 2021/2022.



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 the May 2021 sampling event was completed in June 2021 as described in 40 CFR § 257.93(h)(2), and statistically significant levels (SSLs) of lithium and/or molybdenum were each identified downgradient of the WAP at monitoring well WAP-3S (lithium and molybdenum) and WAP-4S (molybdenum only).

Statistical analysis of the November 2021 sampling event was completed in January 2022 as described in 40 CFR § 257.93(h)(2), and statistically significant levels (SSLs) of lithium and/or molybdenum were each identified downgradient of the WAP at monitoring well WAP-3S (lithium and molybdenum) and WAP-4S (molybdenum only). A false positive SSL for Antimony was also identified at monitoring well WAP-4S due to the presence of an elevated reporting limit above the groundwater protection standards (GWPS). Antimony has not been detected in samples collected from WAP-4S in the 15 prior sampling rounds or the subsequent May 2022 event; therefore, it is not considered an SSL above the GWPS.

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)(6)(€(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 WAP. Evaluation of site-specific aspects that are necessary to prepare for the public meeting and inform the selection of remedy, such as the off-site evaluation of the nature and extent of the release, are in progress.

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

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



The assessment of corrective measures was completed on 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 2021/2022 for lithium and molybdenum at the 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 2021/2022; 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 WAP at the F.B. Culley Generating Station (FBC) is subject to the groundwater monitoring and corrective action requirements described under 40 CFR § 257.90 through § 257.98 (Rule). The 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 closure of the 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 (USEPA) 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 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 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 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 2019 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 WAP at FBC and summarizes key actions completed through the current reporting period.

1.3.1 Status of the Groundwater Monitoring Program

As provided in the notification on 12 July 2019, statistically significant increases (SSIs) of Appendix III constituents were identified downgradient of the WAP. An evaluation of alternate sources was conducted; however, a successful alternate source demonstration (ASD) 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 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 statistically significant levels (SSLs) of Appendix IV constituents above GWPS (lithium and molybdenum) were identified downgradient of the 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 has been completed at the well locations required by IDEM.



1.3.2 Key Actions Completed

The following key actions were completed during 2021/2022:

- Statistical analysis of assessment monitoring results on 19 July 2021 (May 2021 event) to evaluate potential for SSLs of Appendix IV constituents in groundwater downgradient of the WAP. A summary of the statistical analysis is provided in Appendix A.
- Statistical analysis of assessment monitoring results on 12 January 2022 (November 2021 event) to evaluate potential for SSLs of Appendix IV constituents in groundwater downgradient of the WAP. A summary of the statistical analysis is provided in Appendix A.
- Preparation of the 2020/2021 Annual Report which included the following activities:
 - The 2020/2021 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 2020/2021 Annual Report being placed in the facility's Operating Record [§ 257.106(d)].
 - Pursuant to 40 CFR § 257.107(h)(1), the 2020/2021 Annual Report was posted to the CCR Website within 30 days of the 2020/2021 Annual Report being placed in the facility's Operating Record [§ 257.107(d)] and 257.107(h)(1)].
- Assessment monitoring groundwater samples were collected and analyzed in accordance with 40 CFR § 257.95(b) and § 257.95(d)(1). In accordance with 40 CFR § 257.93(c), groundwater elevations were measured during each sampling event. Groundwater configuration maps showing the direction of groundwater flow and the groundwater flow rates are provided as Figures 2 and 3.
- Initiated (or continued) evaluation of the nature and extent of Appendix IV SSLs as required by 40 CFR § 257.95(g)(1);
- Installed an additional well cluster at the facilities boundary in the direction of contaminant migration as required by 40 CFR § 257.95(g)(1)(iii).
- Completed collection of eight rounds of baseline samples at two new well clusters (WAP-6 and WAP-7) to supplement the initial monitoring network.

1.3.3 Problems Encountered

No problems were encountered during the 2021/2022 reporting period.

1.3.4 Actions to Resolve Problems

No actions were taken as there were no problems encountered during the 2021/2022 reporting period.



1.3.5 Project Key Activities for Upcoming Year

Key activities to be completed in 2022/2023 include the following:

- Further define the nature and extent of lithium and molybdenum in groundwater downgradient of the 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).
- Continue to characterize the nature and extent of the contaminant plume downgradient of the WAP.
- Hold a public meeting with interested and affected parties in accordance with 40 CFR
 § 257.96(e) to discuss the results of the corrective measures assessment at least 30 days prior to the selection of remedy.
- Prepare semiannual progress reports, as necessary, describing the progress in selecting and designing the remedy as outlined in 40 CFR § 257.97(a).
- 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 WAP, associated upgradient and downgradient wells installed to comply with the Federal 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.

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 wells were installed or decommissioned during the preceding year.



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 original monitoring well network (WAP-1, CCR-AP-7, WAP-2RR, WAP-3S, WAP-4S, and WAP-5S) under the assessment monitoring program. In addition, eight rounds of baseline sampling, as required by IDEM's Approval of Closure/Post Closure Plan and to comply with 257.91(c) of the Rule for the new Closed-in-Place (CiP) unit, was completed in November 2021 for well clusters WAP-6, WAP-7, and WAP-8.

Five rounds of sampling were conducted during the 2021/2022 reporting period at these locations. 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 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. Monitoring wells WAP-6S and WAP-7S have been added to Table II as these wells monitor the boundary of the former operating unit. 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 January 2022 (November 2021 sampling event) and June 2022 (May 2022 sampling event) as described in 40 CFR § 257.93(h)(2), and the SSLs of lithium and molybdenum continue to be observed downgradient of the WAP, consistent with previous results. As a result, the monitoring program did not change and the 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.



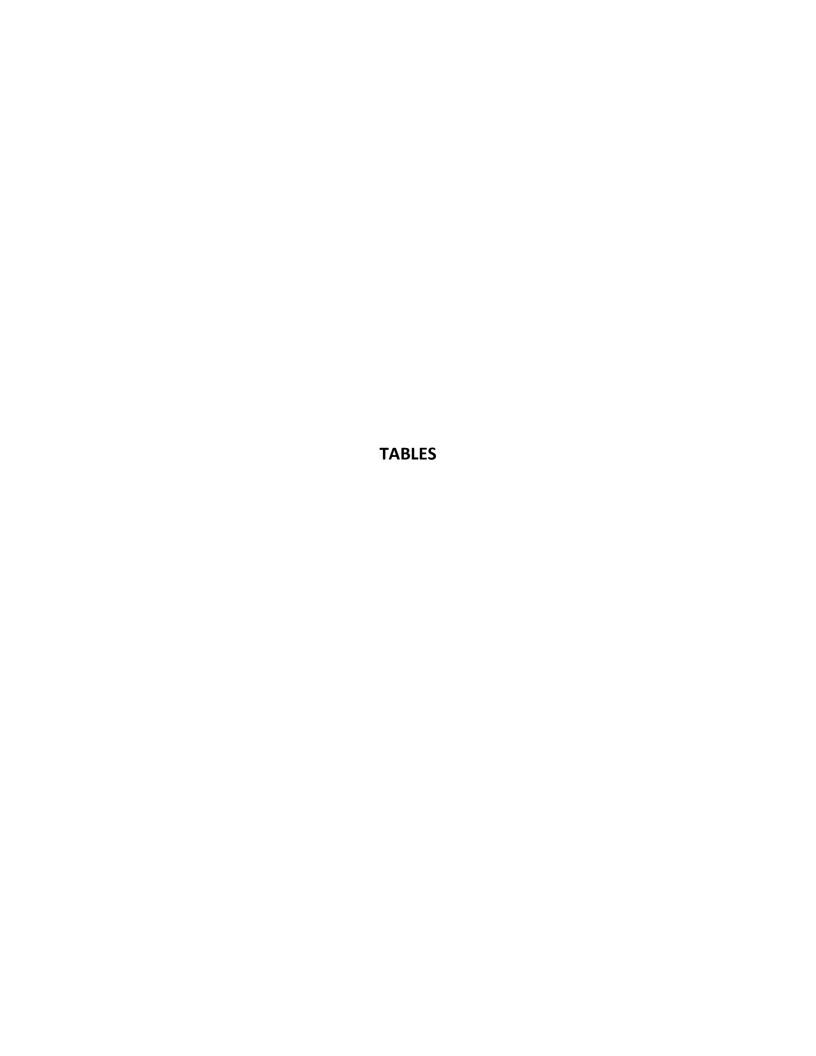


TABLE 1
GROUNDWATER MONITORING WELL LOCATION AND CONSTRUCTION DETAILS
F.B. CULLEY GENERATING STATION - WEST ASH POND
NEWBURGH, INDIANA

	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 \	Vells									
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
Downgradie	nt Wells									
(CCR Monito	ring 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	of Nature & E	xtent)								
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 Appro	val of Closure	/Post-Closur	e Plan)							
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

TABLE 2 SUMMARY OF GROUNDWATER QUALITY DATA FROM THE ORIGINAL CCR MONITORING NETWORK

F.B. CULLEY GENERATING STATION

NEWBURGH, INDIANA

Location Group	Action Level	Un-Gr	radient	1						West Ash Pond						
Location Name	Action Level	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	WAP-5S	WAP-5S	WAP-6S
Sample Name		CCR-AP-7-20211104	CCR-AP-7-20220503	WAP-1-20211104	WAP-1-20220506	WAP-2RR-20211104	WAP-2RR-20220504	WAP-3S-20211103	WAP-3S-20220504	WAP-4S-20211102	WAP-4S-20220503	WAP-5S-20211101	DUP-1-20211101	WAP-5S-20220503	DUP-1-20220503	WAP-6S-20210929
Sample Date	GWPS	11/04/2021	05/03/2022	11/04/2021	05/06/2022	11/04/2021	05/04/2022	11/03/2021	05/04/2022	11/02/2021	05/03/2022	11/01/2021	11/01/2021	05/03/2022	05/03/2022	09/29/2021
Lab Sample ID		180-129641-3	180-137587-10	180-129641-1	180-137837-1	180-129641-2	180-137625-1	180-129535-19	180-137625-2	180-129535-1	180-137587-1	180-129535-4	180-129535-17	180-137587-4	180-137587-11	180-127878-5
Detection Monitoring - EPA Appendix III Constituents (mg/L)																
Boron, Total	4	0.13 J	0.066 J	0.081 UJ	0.08 U	8.3 J-	8	4.7 J-	2.8	13 J-	12	4.8 J-	4.6 J-	4.9	5	2.3
Calcium, Total	NA	110	94	180	160	170	160	94	100	290	280	240	250	230	230	85
Chloride	NA	32 J	22	37	34	92	100	34	43	160	150	150 J	140	120	140	31
Fluoride	4	0.42 J	0.72	0.45	1	0.36	0.4	0.67	0.6	0.28	0.16	0.091 J	0.086 J	0.03 J	0.048 J	0.47
Sulfate	NA	75 J	86	330	220	350	340	120	140	520	450	420 J	420	400	460	96
pH (lab) (pH units)	NA	7.4 J	7.6 J	7.1 J	7.4 J	7.1 J	7.4 J	7.6 J	7.7 J	7.5 J	7.6 J	7 J	6.9 J	7.3 J	7.3 J	7.7 HF
Total Dissolved Solids (TDS)	NA	530	510	930	770	870	870	410	440	1300	1300	1200	1200	1200	1200	460
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)																
Antimony, Total	0.006	0.002 U	0.002 U	0.002 U	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.02 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	0.0055	0.00066 J	0.0041	0.0088	0.0013	0.001	0.00065 J	0.00031 J	0.0046	0.0061	0.0007 J	0.00037 J	0.00039 J	0.00066 J	0.00057 J
Barium, Total	2	0.12	0.076	0.41	0.49	0.057	0.025	0.027	0.03	0.043	0.057	0.046	0.048	0.048	0.045	0.042
Beryllium, Total	0.004	0.001 U	0.001 U	0.001 U	0.00028 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, Total	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.00042 J	0.00046 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Chromium, Total	0.1	0.002 U	0.002 U	0.0033	0.01	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
Cobalt, Total	0.019	0.00054	0.0005 U	0.0017	0.0037	0.0028	0.0022	0.0011	0.00069	0.0023 J	0.0017	0.0076	0.0076	0.006	0.0059	0.00079
Fluoride	4	0.42 J	0.72	0.45	1	0.36	0.4	0.67	0.6	0.28	0.16	0.091 J	0.086 J	0.03 J	0.048 J	0.47
Lead, Total	0.035	0.00013 J	0.001 U	0.0023	0.011	0.00059 J	0.001 U	0.00037 J	0.001 U	0.00013 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00016 J
Lithium, Total	0.04	0.0096	0.0072	0.0061	0.01 J+	0.026	0.026	0.077	0.079	0.005 U	0.0014 J	0.005 U	0.005 U	0.0014 J	0.0015 J	0.005 U
Mercury, Total	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	0.0015 J	0.0014 J	0.0007 J	0.0012 J	0.1	0.082	0.95	0.75	0.46	0.51	0.0011 J	0.00069 J	0.005 U	0.00097 J	0.16
Selenium, Total	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0024 J	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	0.354 ± 0.166	1 U ± 0.276	0.706 ± 0.351	1 U ± 0.505	1 ± 0.537	1 U ± 0.207	1 U ± 0.262	1 U ± 0.195	1 U ± 0.14	1 U ± 0.251	1 U ± 0.125	1 U ± 0.17	1 U ± 0.301	1 U ± 0.154	1 U ± 0.156
Radium-228	NA	1 U ± 0.408	1 U ± 0.286	1 U ± 0.84	1 U ± 0.742	1 U ± 1.26	1 U ± 0.269	1 U ± 0.31	0.442 ± 0.303	1 U ± 0.362	1 U ± 0.343	0.572 ± 0.323	1 U ± 0.258	1 U ± 0.369	1 U ± 0.279	1 U ± 0.324
Radium-226 & 228	NA	5 UJ ± 0.44	5 U ± 0.397	5 UJ ± 0.91	1.24 ± 0.898	2.15 J ± 1.37	5 U ± 0.339	5 UJ ± 0.406	0.639 J ± 0.36	5 U ± 0.388	0.547 ± 0.425	0.677 J ± 0.346	5 UJ ± 0.309	0.789 ± 0.476	5 U ± 0.319	5 U ± 0.36
Field Parameters																
Temperature (Deg C)	NA	16.96	117.96	-	16.95	16.26	16.54	16.8	16.59	15.44	18.04	16.17	16.17	18.17	18.17	15.8
Dissolved Oxygen, Field (mg/L)	NA	0.26	0.31	-	3.6	0.05	0.04	0.15	0.2	0.27	0.08	0.12	0.12	0.1	0.1	0.07
Conductivity, Field (mS/cm)	NA	0.91409	0.79971	-	1.026	1.227	1.3453	0.62639	0.76286	1.6709	1.8095	1.6499	1.6499	1.8006	1.8006	0.66814
Oxidation Reduction Potential (ORP), Field (mv)	NA	-120.3	-53.7	-	-88.8	82.3	44.9	-14.1	58.5	21.6	25	47.4	47.4	5.9	5.9	14.4
Turbidity, Field (NTU)	NA	0.52	48.91	-	175.55	8.54	0.52	10.23	4.89	5.7	16.78	0	0	0.9	0.9	14.55
pH, Field (pH units)	NA	7.19	7.03	-	7.17	6.83	6.37	7.65	7.21	7.27	6.95	6.63	6.63	6.39	6.39	7.48

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mg/L: milligram per liter.

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GWPS: Groundwater Protection Standard.

MCL: Maximum Contaminant Level.

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SUMMARY OF GROUNDWATER QUALITY DATA FROM THE ORIGINAL CCR MONITORING NETWORK
F.B. CULLEY GENERATING STATION

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Location Group	Action Level			West Ash Pond	ı	1
Location Name		WAP-6S	WAP-6S	WAP-7S	WAP-7S	WAP-7S
Sample Name	GWPS	WAP-6S-20211102	WAP-6S-20220503	WAP-7S-20210930	WAP-7S-20211103	WAP-7S-20220504
Sample Date		11/02/2021	05/03/2022	09/30/2021	11/03/2021	05/04/2022
Lab Sample ID		180-129535-7	180-137587-7	180-127924-2	180-129538-1	180-137625-4
Detection Monitoring - EPA Appendix III Constituents (mg/L)						
Boron, Total	4	2.2 J-	2.4	9.8	16 J-	13
Calcium, Total	NA	89	110	140	150	180
Chloride	NA	32	39	58	63	73
Fluoride	4	0.39	0.37	0.42	0.13	0.11
Sulfate	NA	95	130	270 F1	310	350
pH (lab) (pH units)	NA	7.6 J	7.6 J	8.4 HF	9.9 J	9.8 J
Total Dissolved Solids (TDS)	NA	430	570	630	720	850
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)					-	
Antimony, Total	0.006	0.002 U	0.002 U	0.00074 J	0.0014 J	0.0013 J
Arsenic, Total	0.025	0.001	0.002 0 0.0024	0.005	0.00143	0.0071
Barium, Total	2	0.042	0.074	0.036	0.032	0.046
Beryllium, Total	0.004	0.042 0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, Total	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, Total	0.003	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cobalt, Total	0.019	0.002 0	0.0014	0.002 U	0.002 0 0.00016 J	0.002 U
Fluoride	0.019	0.0092	0.0014	0.42	0.000163	0.0003 0 0.11
Lead, Total	0.035	0.00018 J	0.00044 J	0.42 0.001 U	0.00022 J	0.001 U
Lithium, Total	0.033	0.0018 J		0.001 0 0.12		0.001 0
Mercury, Total	0.04	0.005 U	0.0031 J 0.0002 U	0.12 0.0002 U	0.13 0.0002 U	0.0002 U
Molybdenum, Total Selenium, Total	0.1 0.05	0.16 0.005 U	0.11 0.005 U	0.22 0.005 U	0.17 0.005 U	0.23 0.00074 J
Thallium, Total	0.002	0.005 U 0.00023 J	0.005 U 0.001 U	0.005 U 0.001 U	0.003 U	0.0074 J 0.001 U
maillum, rotai	0.002	0.00023 J	0.001 0	0.001 0	0.00038 J	0.001 0
Radiological (pCi/L)						
Radium-226	NA	1 U ± 0.17	1 U ± 0.211	1 U ± 0.157	1 U ± 0.0806	1 U ± 0.2
Radium-228	NA	0.872 ± 0.468	1 U ± 0.321	1 U ± 0.388	0.494 J ± 0.248	1 U ± 0.33
Radium-226 & 228	NA	0.985 J ± 0.498	5 U ± 0.384	5 U ± 0.419	0.549 J ± 0.261	0.559 ± 0.386
Field Parameters						
Temperature (Deg C)	NA	15.68	20.49	17.39	16.47	16.85
Dissolved Oxygen, Field (mg/L)	NA	0.19	0.65	0.13	0.23	0.09
Conductivity, Field (mS/cm)	NA	0.66963	0.88095	0.88299	0.94708	1.2015
Oxidation Reduction Potential (ORP), Field (mv)	NA	-67.5	41.3	35.6	-121.9	37.7
Turbidity, Field (NTU)	NA	8.59	3.56	0	0	2.45
pH, Field (pH units)	NA	7.23	6.9	9.13	10.29	9.83
ADDDENIATIONS AND NOTES				·	·	

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TABLE 3 SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS INSTALLED TO ASSESS THE NATURE AND EXTENT OF APPENDIX IV SSIS F.B. CULLEY GENERATING STATION

	Location Group	Action Level								West	Ash Pond							
	Location Name		WAP-3D	WAP-3D	WAP-4I	WAP-4I	WAP-4I	WAP-4I	WAP-4D	WAP-4D	WAP-4D	WAP-4D	WAP-5I	WAP-5I	WAP-5I	WAP-5D	WAP-5D	WAP-5D
	Sample Name	GWPS	WAP-3D-20211103	WAP-3D-20220504	WAP-4I-20210928	WAP-4I-20211102	WAP-4I-20220503	DUP-2-20220503	WAP-4D-20210928	DUP-1-20210928	WAP-4D-20211102	WAP-4D-20220503	WAP-5I-20210928	WAP-5I-20211101	WAP-5I-20220503	WAP-5D-20210928	WAP-5D-20211101	WAP-5D-20220503
	Sample Date	GWF3	11/03/2021	05/04/2022	09/28/2021	11/02/2021	05/03/2022	05/03/2022	09/28/2021	09/28/2021	11/02/2021	05/03/2022	09/28/2021	11/01/2021	05/03/2022	09/28/2021	11/01/2021	05/03/2022
	Lab Sample ID		180-129535-20	180-137625-3	180-127878-3	180-129535-2	180-137587-2	180-137587-12	180-127878-4	180-127878-11	180-129535-3	180-137587-3	180-127878-1	180-129535-5	180-137587-5	180-127878-2	180-129535-6	180-137587-6
Detection Monitoring - EPA Appendix III Con	stituents (mg/L)																	
Boron, Total		4	4.3 J-	3.4	0.07 J	0.18 J	0.099	0.085	0.11	0.039 J	0.08 UJ	0.08 U	0.06 J	0.14 J	0.08 U	0.041 J	0.082 UJ	0.12
Calcium, Total		NA	100	110	38	47	36	35	46	48	50	48	39	45	38	46	47	47
Chloride		NA	36	45	21	29	24	26	20	19	21	24	22	28	23	19	1 U	21
Fluoride		4	0.44	0.36	0.15	0.12	0.059 J	0.079 J	0.14	0.14	0.13	0.1 J	0.16	0.12	0.22	0.15	0.047 J	0.14
Sulfate		NA	1 U	180	37	46	38	43	28	26	26	31	43	47	41	41	0.87 J	42
pH (lab) (pH units)		NA	7.7 J	7.7 J	7.8 HF	7.7 J	7.9 J	7.8 J	7.9 HF	8 HF	7.8 J	7.9 J	7.8 HF	7.6 J	7.7 J	7.7 HF	7.6 J	7.8 J
Total Dissolved Solids (TDS)		NA	480	530	230	240	200	190	230	240	250	240	220	240	200	230	220	230
Assessment Monitoring - EPA Appendix IV Co	onstituents (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				
Arsenic, Total		0.025	0.001 U	0.001 U	0.0045	0.013	0.012 J	0.0068 J	0.0093	0.0092	0.0097	0.0098	0.012	0.01	0.0043	0.0099	0.01	0.011
Barium, Total		2	0.012	0.012	0.17	0.21	0.15	0.14	0.28	0.28	0.28	0.28	0.12	0.13	0.1	0.2	0.19	0.21
Beryllium, Total		0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Cadmium, Total		0.005	0.001 U	0.00022 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, Total		0.1	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				
Cobalt, Total		0.019	0.00075	0.00069	0.00047 J	0.0011	0.00042 J	0.00037 J	0.00023 J	0.0005 U	0.00023 J	0.0005 U	0.00042 J	0.00048 J	0.0003 J	0.0005 U	0.0005 U	0.0005 U
Fluoride		4	0.44	0.36	0.15	0.12	0.059 J	0.079 J	0.14	0.14	0.13	0.1 J	0.16	0.12	0.22	0.15	0.047 J	0.14
Lead, Total		0.035	0.001 U	0.001 U	0.001 U	0.00015 J	0.00025 J	0.001 U	0.00015 J	0.001 U	0.001 U	0.001 U	0.0002 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium, Total		0.04	0.073	0.079	0.0042 J	0.0044 J	0.003 J	0.0032 J	0.005 U	0.005 U	0.005 U	0.002 J	0.0039 J	0.0038 J	0.0031 J	0.005 U	0.005 U	0.0016 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	0.44	0.43	0.002 J	0.0032 J	0.0017 J	0.0019 J	0.0052	0.0051	0.005	0.0055	0.0016 J	0.0019 J	0.0017 J	0.0038 J	0.0039 J	0.0045 J
Selenium, Total		0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U				
Thallium, Total		0.002	0.001 U	0.001 U	0.001 UF2	0.001 U	0.001 U	0.001 U	0.00024 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)																		
Radium-226		NA	1 U ± 0.249	1 U ± 0.17	0.244 ± 0.158	1 U ± 0.241	1 U ± 0.373	1 U ± 0.206	0.607 ± 0.21	0.378 ± 0.183	1 U ± 0.158	1 U ± 0.345	0.224 ± 0.153	1 U ± 0.181	1 U ± 0.202	0.36 ± 0.215	1 U ± 0.161	0.47 ± 0.261
Radium-228		NA	1 U ± 0.247	1 U ± 0.252	1 U ± 0.268	0.797 ± 0.437	0.716 ± 0.447	1 U ± 0.307	1 U ± 0.247	1 U ± 0.226	1.12 ± 0.484	1 U ± 0.383	0.447 ± 0.269	0.928 ± 0.394	1 U ± 0.307	1 U ± 0.352	1 U ± 0.266	1 U ± 0.321
Radium-226 & 228		NA	5 UJ ± 0.351	5 U ± 0.304	0.495 ± 0.311	5 U ± 0.499	1.2 J ± 0.582	5 U ± 0.37	0.834 ± 0.324	0.535 ± 0.291	1.46 J+ ± 0.509	1.01 ± 0.515	0.671 ± 0.309	1.34 J+ ± 0.434	5 U ± 0.367	0.75 ± 0.412	0.652 J+ ± 0.311	0.836 J ± 0.414
Field Parameters																		
Temperature (Deg C)		NA	16.54	16.73	17.95	17.56	17.25	17.25	17.32	17.32	17.29	16.62	16.87	17.9	16.36	18.65	17.38	17.89
Dissolved Oxygen, Field (mg/L)		NA	0.21	0.14	0.15	0.24	0.19	0.19	0.13	0.13	0.17	0.11	0.07	0.17	0.07	0.18	0.19	0.19
Conductivity, Field (mS/cm)		NA	0.72904	0.88726	0.637768	0.39791	0.34073	0.34073	0.39362	0.39362	0.0142	0.42454	0.3843	0.39355	0.353	0.38915	371.91	0.41863
Oxidation Reduction Potential (ORP), Field (m	v)	NA	-6.3	73.6	41.7	-3.5	15.6	15.6	-81.5	-81.5	-126.3	-41.6	84.9	11.1	31.3	-31.2	-77.9	-3.4
Turbidity, Field (NTU)		NA	0	0	0	2.15	4.3	4.3	0	0	0	1.66	0.71	0.99	0.38	0	0	0.85
pH, Field (pH units)		NA	7.68	7.31	7.02	7.39	7.28	7.28	7.4	7.4	7.66	7.25	6.91	7.28	6.97	7.23	7.39	6.98

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Location Group	Action Level						V	Vest Ash Pond						
Location Name	2	WAP-9S	WAP-9S	WAP-9S	WAP-9S	WAP-9S	WAP-9I	WAP-9I	WAP-9I	WAP-9I	WAP-9D	WAP-9D	WAP-9D	WAP-9D
Sample Name	GWPS	WAP-9S-20210804	WAP-9S-20210909	BLIND DUPLICATE-20210909	WAP-9S-20211102	WAP-9S-20220504	WAP-9I-20210804	WAP-9I-20210909	WAP-9I-20211103	WAP-9I-20220504	WAP-9D-20210804	WAP-9D-20210909	WAP-9D-20211103	WAP-9D-20220504
Sample Date	GWPS	08/04/2021	09/09/2021	09/09/2021	11/02/2021	05/04/2022	08/04/2021	09/09/2021	11/03/2021	05/04/2022	08/04/2021	09/09/2021	11/03/2021	05/04/2022
Lab Sample IE		180-125560-1	180-126888-3	180-126888-4	180-129535-13	180-137625-9	180-125560-2	180-126888-2	180-129535-14	180-137625-10	180-125560-3	180-126888-1	180-129535-15	180-137625-11
Detection Monitoring - EPA Appendix III Constituents (mg/L)														
Boron, Total	4	2.7	1.2	1.3	1.6 J-	0.86	0.096	0.1	0.22 J	0.35	0.066 J	0.052	0.15 J	0.072 J
Calcium, Total	NA	99	74	75	82	66	40	46	47	48	40	42	37	44
Chloride	NA	33	26	23	27	26	22	22	24	20	21	20	17	24
Fluoride	4	0.86	0.94	0.87	0.84	0.98	0.15	0.17	0.21	0.14	0.12	0.14	0.31	0.12
Sulfate	NA	99	42	40	55	61	36	31	32	40	41	39	36	40
pH (lab) (pH units)	NA	7.5 J	7.9 J	8 1	7.8 J	8 J	7.7 J	8 J	7.6 J	81	7.6 J	7.9 J	7.6 J	7.9 J
Total Dissolved Solids (TDS)	NA	540	340	340	370	310	230	230	230	240	230	210	200	210
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)														
Antimony, Total	0.006	0.00097 J	0.002	0.002	0.002 U	0.002 U	0.002 U	0.002	0.00057 J	0.002 U	0.00082 J	0.002	0.0012 J	0.002 U
Arsenic, Total	0.025	0.0076	0.0008	0.00094	0.0034	0.00079 J	0.0039	0.0047	0.0049	0.0053	0.0088	0.0053	0.0014	0.0069
Barium, Total	2	0.2	0.087	0.087	0.12	0.08	0.086	0.091	0.089	0.1	0.21	0.18	0.12	0.22
Beryllium, Total	0.004	0.00047 J	0.001	0.001	0.00023 J	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.001 U	0.001	0.001 U	0.001 U
Cadmium, Total	0.005	0.001	0.001	0.001	0.00035 J	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.001 U	0.001	0.001 U	0.001 U
Chromium, Total	0.1	0.015	0.002	0.002	0.0065	0.002 U	0.002 U	0.002	0.002 U	0.002 U	0.0065	0.002	0.0017 J	0.002 U
Cobalt, Total	0.019	0.01	0.00072	0.00086	0.0041	0.0006	0.00021 J	0.00033	0.00031 J	0.00027 J	0.0048	0.0003	0.00025 J	0.0005 U
Fluoride	4	0.86	0.94	0.87	0.84	0.98	0.15	0.17	0.21	0.14	0.12	0.14	0.31	0.12
Lead, Total	0.035	0.013	0.00032	0.00039	0.0044	0.001 U	0.001 U	0.00028	0.00014 J	0.001 U	0.0066	0.00032	0.00032 J	0.001 U
Lithium, Total	0.04	0.022	0.011	0.012	0.015	0.01	0.005 U	0.0043	0.0038 J	0.0042 J	0.005	0.005	0.0038 J	0.0025 J
Mercury, Total	0.002	0.0002 U	0.0002	0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002	0.0002 U	0.0002 U
Molybdenum, Total	0.1	0.2	0.15	0.15	0.15	0.15	0.018	0.02	0.018	0.018	0.0029 J	0.0022	0.0035 J	0.0027 J
Selenium, Total	0.05	0.005 U	0.005	0.005	0.005 U	0.005 U	0.005 U	0.005	0.005 U	0.005 U	0.005 U	0.005	0.005 U	0.005 U
Thallium, Total	0.002	0.00024 J	0.001	0.001	0.00019 J	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.001 U	0.001	0.001 U	0.001 U
Radiological (pCi/L)														
Radium-226	NA	1 U ± 0.619	1 ± 0.206	1 ± 0.174	1 U ± 0.255	1 U ± 0.188	1 U ± 0.219	0.323 ± 0.223	1 U ± 0.145	1 U ± 0.153	1 U ± 0.247	0.526 ± 0.228	1 U ± 0.148	1 U ± 0.166
Radium-228	NA	1 U ± 0.56	1 ± 0.284	0.517 ± 0.302	1 U ± 0.542	1 U ± 0.351	1 U ± 0.228	1 ± 0.395	0.854 ± 0.46	1 U ± 0.309	0.539 ± 0.256	1 ± 0.283	1 U ± 0.334	1 U ± 0.337
Radium-226 & 228	NA	5 U ± 0.835	0.484 ± 0.351	0.749 J ± 0.349	5 UJ ± 0.599	5 UJ ± 0.398	5 U ± 0.316	0.74 J ± 0.454	1.05 J ± 0.482	0.729 UJ ± 0.345	0.867 J ± 0.356	0.717 J ± 0.363	0.553 J+ ± 0.365	0.914 UJ ± 0.376
Field Parameters														
Temperature (Deg C)	NA	18.93	16.48	16.48	14.4	18.62	16.77	26.42	14.51	16.74	16.6	25.79	15.52	18.78
Dissolved Oxygen, Field (mg/L)	NA	0.09	0.28	0.28	0.13	3.34	0	4.79	1.25	2	0	11	6.23	1.53
Conductivity, Field (mS/cm)	NA	0.54012	0.57417	0.57417	0.5777	0.51836	0.29059	0.40683	0.3955	0.38976	0.32011	0.34784	0.30848	0.36163
Oxidation Reduction Potential (ORP), Field (mv)	NA	-60.1	81.9	81.9	-81.3	-31.2	-52.1	32.2	-14.3	-53.3	-45.3	44.9	-8.78	-86.1
Turbidity, Field (NTU)	NA	40.2	20.75	20.75	81.67	11.6	27.2	14.32	0	0	14.62	34.57	12.37	0.09
pH, Field (pH units)	NA	7.18	7.14	7.14	7.59	7.49	7.26	7.33	7.63	7.44	7.15	7.1	7.56	7.42

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TABLE 4 SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS INSTALLED TO COMPLY WITH IDEM APPROVAL OF CLOSURE/POST-CLOSURE F.B. CULLEY GENERATING STATION

Location Group	Action Level								West Ash	n Pond							
Location Name		WAP-6I	WAP-6I	WAP-6I	WAP-6D	WAP-6D	WAP-6D	WAP-7D	WAP-7D	WAP-7D	WAP-8S	WAP-8S	WAP-8S	WAP-8S	WAP-8I	WAP-8I	WAP-8I
Sample Name	GWPS	WAP-6I-20210929	WAP-6I-20211102	WAP-6I-20220503	WAP-6D-20210929	WAP-6D-20211102	WAP-6D-20220503	WAP-7D-20210930	WAP-7D-20211103	WAP-7D-20220504	WAP-8S-20210929	WAP-8S-20211102	DUP-2-20211102	WAP-8S-20220504	WAP-8I-20210929	WAP-8I-20211102	WAP-8I-20220504
Sample Date	GWF3	09/29/2021	11/02/2021	05/03/2022	09/29/2021	11/02/2021	05/03/2022	09/30/2021	11/03/2021	05/04/2022	09/29/2021	11/02/2021	11/02/2021	05/04/2022	09/29/2021	11/02/2021	05/04/2022
Lab Sample ID		180-127878-6	180-129535-8	180-137587-8	180-127878-7	180-129535-9	180-137587-9	180-127924-3	180-129538-2	180-137625-5	180-127878-8	180-129535-10	180-129535-18	180-137625-6	180-127878-9	180-129535-11	180-137625-7
Detection Monitoring - EPA Appendix III Constituents (mg/L)																	
Boron, Total	4	0.083	0.11 UJ	0.083	0.065 J	0.08 UJ	0.066 J	14	14 J-	12	2.7	3.1 J-	3.1 J-	2.1	0.083	0.14 J	0.13
Calcium, Total	NA	41	46	37	39	41	41	430	450	370	140	150	150	130	44	45	44
Chloride	NA	22	27	19	21	23	23	180	180	150	74	85	86	56	22	23	26
Fluoride	4	0.15	0.13	0.077 J	0.14	0.13	0.16	0.5	0.4	0.36	0.11	0.12	0.11	0.1	0.22	0.17	0.25
Sulfate	NA	38	40	35	38	40	36	1000	1200	890	270	300	300	200	47	41	55
pH (lab) (pH units)	NA	7.9 HF	7.8 J	7.8 J	7.6 HF	7.8 J	81	7.6 HF	7.3 J	7.8 J	8 HF	7.9 J	7.9 J	8.1 J	7.9 HF	7.8 J	8 J
Total Dissolved Solids (TDS)	NA	220	270	230	230	210	340	2100	2000	3800	900	780	780	610	240	270	280
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				
Arsenic, Total	0.025	0.0033	0.0043	0.0038	0.0054	0.0056	0.0058	0.001	0.0011	0.0014	0.017	0.016	0.016	0.015	0.0034	0.0034	0.01
Barium, Total	2	0.13	0.15	0.12	0.19	0.19	0.19	0.047	0.045	0.036	0.25	0.26	0.26	0.17	0.05	0.05	0.056
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	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Chromium, Total	0.1	0.002 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				
Cobalt, Total	0.019	0.00023 J	0.00036 J	0.0003 J	0.00013 J	0.0005 U	0.0005 U	0.0065	0.0068	0.0046	0.00066	0.00084	0.00071	0.00069	0.00047 J	0.00049 J	0.00041 J
Fluoride	4	0.15	0.13	0.077 J	0.14	0.13	0.16	0.5	0.4	0.36	0.11	0.12	0.11	0.1	0.22	0.17	0.25
Lead, Total	0.035	0.001 U	0.001 U	0.00022 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Lithium, Total	0.04	0.0036 J	0.004 J	0.0036 J	0.005 U	0.005 U	0.0026 J	0.063	0.063	0.057	0.039	0.038	0.038	0.035	0.005 U	0.005 U	0.0033 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	0.0054	0.0061	0.0065	0.0019 J	0.0023 J	0.002 J	0.34	0.29	0.24	0.27	0.27	0.28	0.26	0.033	0.033	0.035
Selenium, Total	0.05	0.005 U	0.005 U	0.005 U	0.005 U	0.0032 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	0.00034 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00016 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)																	
Radium-226	NA	0.445 ± 0.174	1 U ± 0.141	1 U ± 0.201	0.302 ± 0.148	1 U ± 0.134	1 U ± 0.269	0.627 ± 0.207	0.595 ± 0.186	1 U ± 0.343	0.358 ± 0.162	1 U ± 0.125	1 U ± 0.213	0.402 ± 0.213	1 U ± 0.166	1 U ± 0.135	0.354 ± 0.204
Radium-228	NA	0.386 ± 0.253	1.71 ± 0.549	1 U ± 0.371	1 U ± 0.207	0.715 ± 0.392	0.628 ± 0.345	1 U ± 0.389	1.05 J ± 0.36	1 U ± 0.495	1 U ± 0.249	1 U ± 0.282	1 U ± 0.248	1 U ± 0.345	1 U ± 0.31	1 U ± 0.38	1 U ± 0.289
Radium-226 & 228	NA	0.831 ± 0.307	1.88 J ± 0.567	5 U ± 0.422	0.365 ± 0.254	0.932 J+ ± 0.414	1.01 J ± 0.437	1.17 ± 0.441	1.64 J ± 0.405	0.936 ± 0.602	0.608 ± 0.297	0.667 J+ ± 0.308	5 UJ ± 0.327	1.1 J+ ± 0.405	5 U ± 0.352	0.703 J+ ± 0.403	0.583 J ± 0.354
Field Parameters																	
Temperature (Deg C)	NA	17.6	16.45	21.34	16.17	16.12	21.77	17.17	16.7	16.75	17.42	16.21	16.21	17.2	16.83	15.72	17.91
Dissolved Oxygen, Field (mg/L)	NA	0.21	0.19	1.06	0.15	0.25	0.62	0.1	0.17	0.12	0.05	0.15	0.15	0.1	0.1	0.2	0.13
Conductivity, Field (mS/cm)	NA	0.36258	0.39278	0.33227	0.35056	0.35578	0.34998	2.3761	2.2215	2.5692	1.0221	1.1128	1.1128	0.99715	0.37893	0.3692	0.43451
Oxidation Reduction Potential (ORP), Field (mv)	NA	-30.7	-61.6	-46.8	-75.5	-113.6	-114.2	-13.9	-43.1	16.9	-136	-160	-160	45.7	-62.5	-83.6	-2.2
Turbidity, Field (NTU)	NA	0	0	1.62	0.68	0	0.56	0	0	0	6.02	4.31	4.31	13.91	0.76	0	0.37
pH, Field (pH units)	NA	7.79	7.52	7.36	7.79	7.55	7.18	7.72	7.24	6.98	7.952	7.84	7.84	7.35	7.77	7.46	7.02

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TABLE 4 SUMMARY OF GROUNDWATER QUALITY DATA FOR MONITORING WELLS INSTALLED TO COMPLY WITH IDEM APPROVAL OF CLOSURE/POST-CLOSURE F.B. CULLEY GENERATING STATION NEWBURGH, INDIANA

Location Group	Action Level		West Ash Pond	
Location Name		WAP-8D	WAP-8D	WAP-8D
Sample Name	CMBC	WAP-8D-20210929	WAP-8D-20211102	WAP-8D-20220504
Sample Date	GWPS	09/29/2021	11/02/2021	05/04/2022
Lab Sample ID		180-127878-10	180-129535-12	180-137625-8
Detection Monitoring - EPA Appendix III Constituents (mg/L)				
Boron, Total	4	0.058 J	0.081 UJ	0.084
Calcium, Total	NA	39	42	50
Chloride	NA	20	22	24
Fluoride	4	0.18	0.14	0.14
Sulfate	NA	43	45	52
pH (lab) (pH units)	NA	7.9 HF	7.7 J	8 J
Total Dissolved Solids (TDS)	NA	230	210	220
Assessment Monitoring - EPA Appendix IV Constituents (mg/L)				
Antimony, Total	0.006	0.002 U	0.002 U	0.002 U
Arsenic, Total	0.025	0.0024	0.0026	0.0031
Barium, Total	2	0.061	0.067	0.08
Beryllium, Total	0.004	0.001 U	0.001 U	0.001 U
Cadmium, Total	0.005	0.001 U	0.001 U	0.001 U
Chromium, Total	0.1	0.002 U	0.002 U	0.002 U
Cobalt, Total	0.019	0.0005 U	0.0005 U	0.0005 U
Fluoride	4	0.18	0.14	0.14
Lead, Total	0.035	0.001 U	0.001 U	0.001 U
Lithium, Total	0.04	0.005 U	0.005 U	0.0027 J
Mercury, Total	0.002	0.0002 U	0.0002 U	0.0002 U
Molybdenum, Total	0.1	0.0013 J	0.0013 J	0.0015 J
Selenium, Total	0.05	0.005 U	0.005 U	0.005 U
Thallium, Total	0.002	0.001 U	0.001 U	0.001 U
Radiological (pCi/L)				
Radium-226	NA	1 U ± 0.133	1 U ± 0.136	1 U ± 0.216
Radium-228	NA	1 U ± 0.199	1 U ± 0.425	1 U ± 0.292
Radium-226 & 228	NA	5 U ± 0.239	5 UJ ± 0.446	0.512 ± 0.363
Field Parameters				
Temperature (Deg C)	NA	17.87	16.14	17.26
Dissolved Oxygen, Field (mg/L)	NA	0.2	0.26	0.15
Conductivity, Field (mS/cm)	NA	0.34592	0.29429	0.42741
Oxidation Reduction Potential (ORP), Field (mv)	NA	-68.4	-121.1	-36
Turbidity, Field (NTU)	NA	0.08	0	0
pH, Field (pH units)	NA	7.48	7.57	7.08

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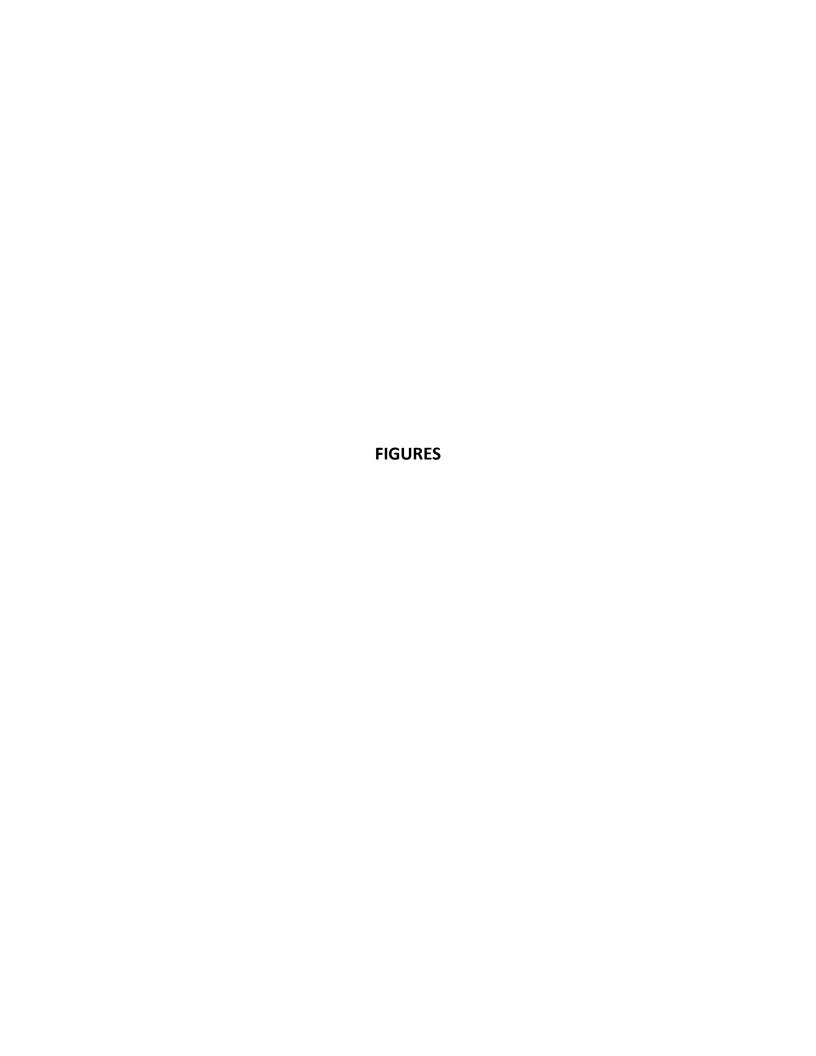
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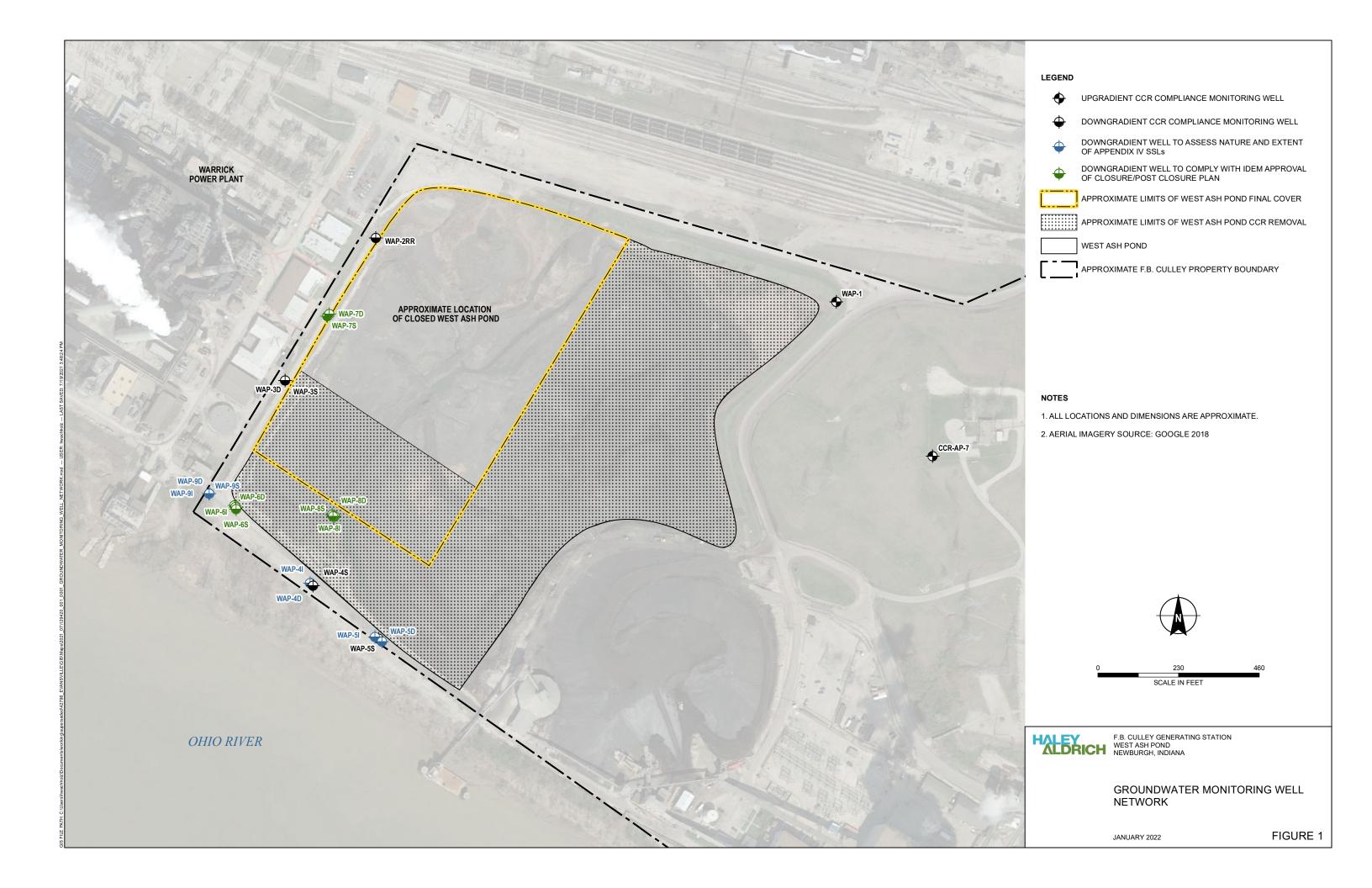
Results in **bold** are detected.

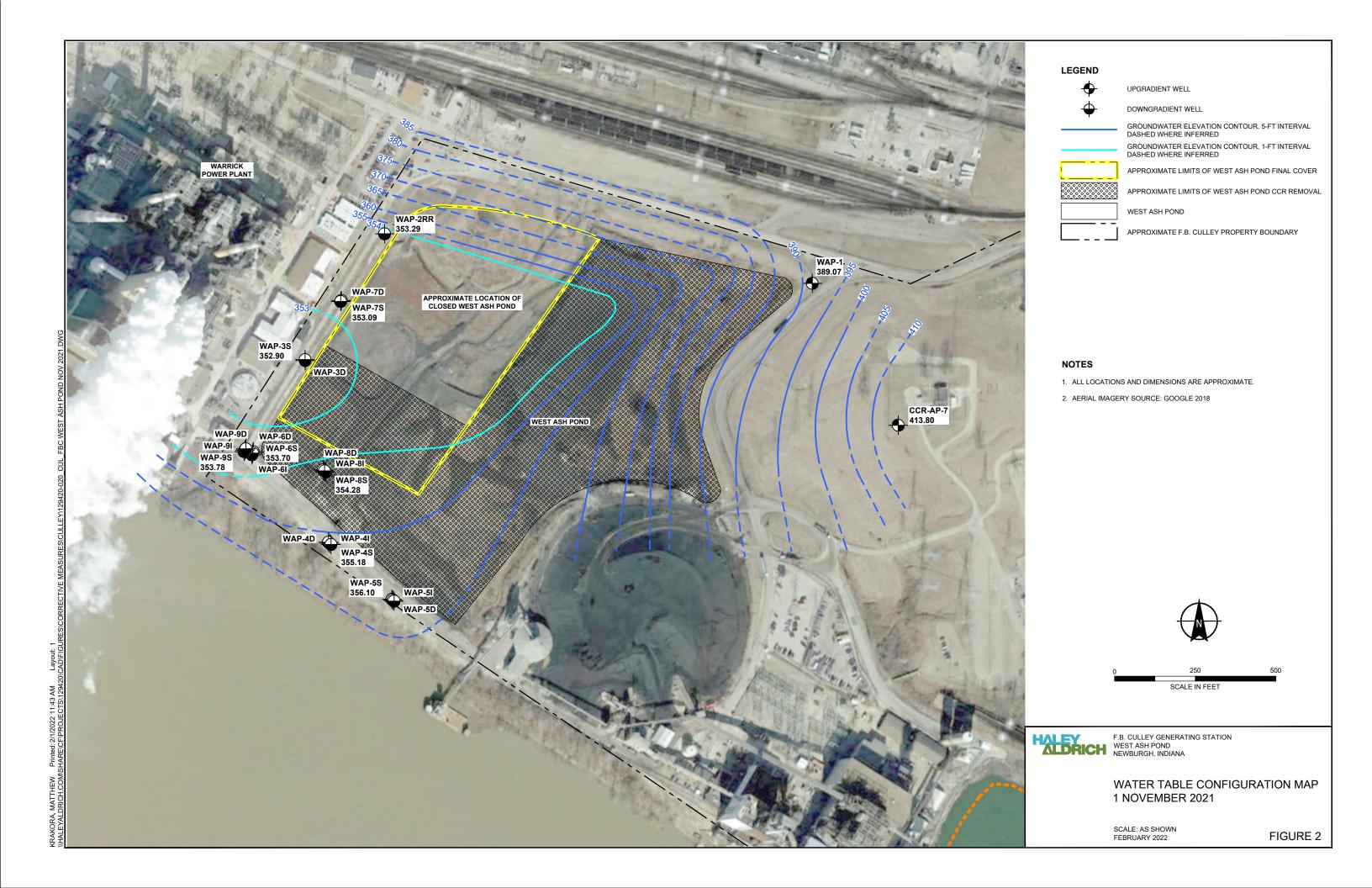
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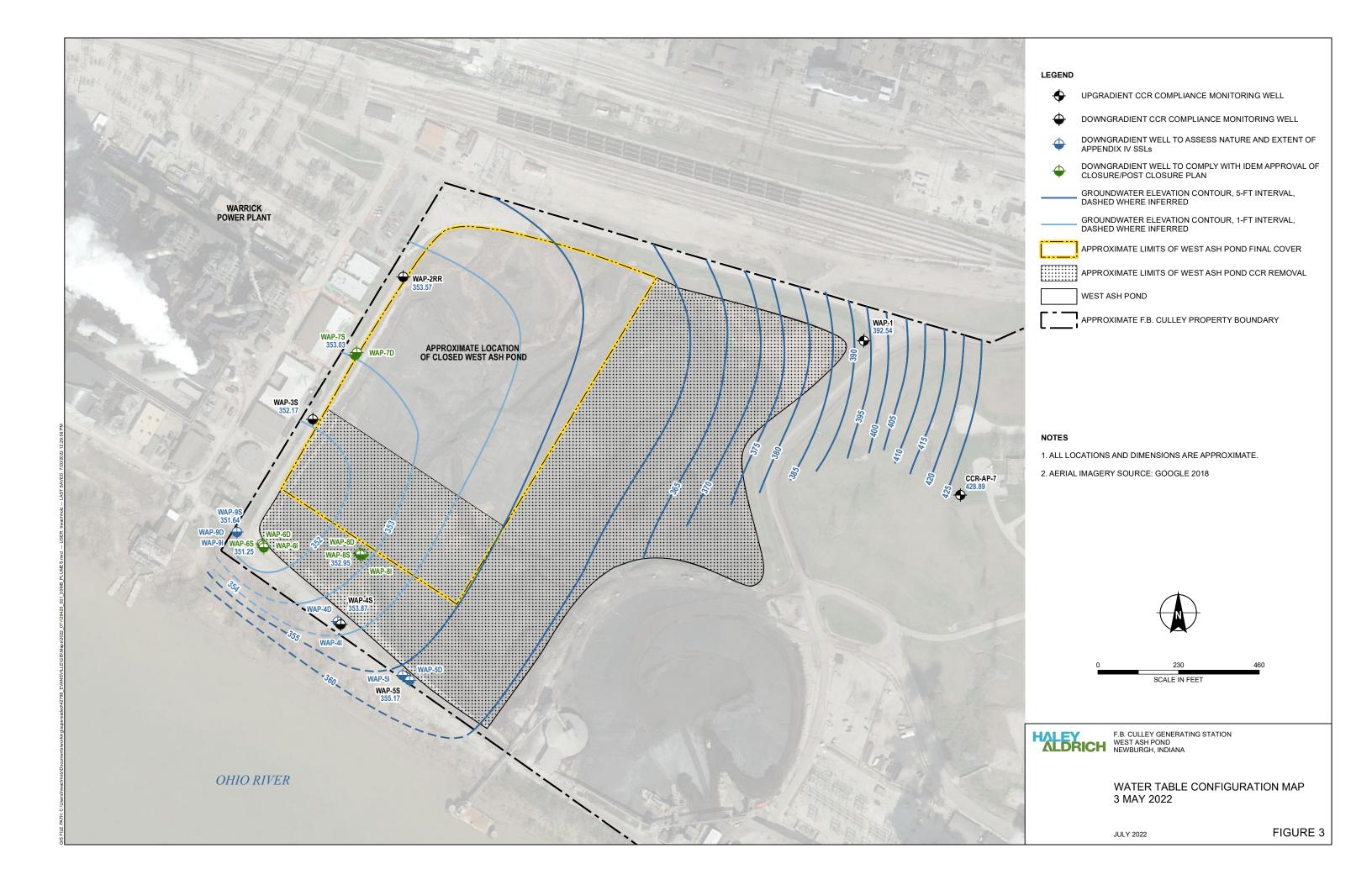
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APPENDIX A

Summary of Statistical Analysis

Prepared: July 19, 2021

																									GWPS (Higher of	Exceedance	
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 Well*	May 2021 Concentration (mg/L)	Detect?	LCL (mg/L)	Upper Tolerance Limit (mg/L)	SSI	MCL/RSL or Upper Tolerance Limit) mg/L	above Background at Individual Well	SSL May 2021
							CCR Appendi	x-IV: Antimony,	Fotal (mg/L)																	Well	
CCR-AP-7	3/17	82%	0.002-0.002	0.00174	0.002	0.002	0.00083	3.453E-07	0.0005876	0.3374	0.006	mg/L	N	0	0	No	No	NA	Non-parametric				0.002		0.006		
WAP-1	7/14	50%	0.002-0.002	0.0015	0.0019	0.002	0.0018	3.792E-07	0.0006158	0.4117	0.006	mg/L	N	0	0	No	No	Decreasing	- Non-parametric				0.002		0.006		
WAP-2RR	0/14	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	1/14	93%	0.002-0.002	0.00189	0.002	0.002	0.00043	1.761E-07	0.0004196	0.2223	0.006	mg/L	N	0	0	NA	NA	NA		0.002	N			N		N	No
WAP-4S	0/14	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-5S	0/14	100%	0.002-0.0021	0.00201	0.002	0.002035		7.143E-10	0.00002673	0.01332	0.006	mg/L	N	0	0	NA	NA	NA		0.002	N			N		N	No
							CCR Append	dix-IV: Arsenic, To	otal (mg/L)																		
CCR-AP-7	17/17	0%	-	0.00696	0.0064	0.0156	0.018	0.00001735	0.004165	0.598	0.01	mg/L	Y	2	0	Yes	No	Stable	Log-transformed				0.018		0.018		
WAP-1	14/14	0%	-	0.00904	0.00695	0.0224	0.025	0.00004571	0.006761	0.7477	0.01	mg/L	Y	4	0	Yes	No	Stable									
WAP-2RR	13/14	7%	0.001-0.001	0.00173	0.00088	0.006565	0.0078	0.000004995	0.002235	1.291	0.01	mg/L	N	0	0	Yes	No	Stable		0.00210	Y			N		N	No
WAP-3S	14/14	0%	-	0.00263	0.0025	0.00471	0.0064	0.000001924	0.001387	0.528	0.01	mg/L	N	0	0	Yes	No	Decreasing		0.00097	Y			N		N	No
WAP-4S	14/14	0%	-	0.00395	0.0039	0.005645	0.0061	0.000001782	0.001335	0.3383	0.01	mg/L	N	0	0	No	No	Stable		0.00510	Y			N		N	No
WAP-5S	12/14	14%	0.001-0.001	0.0011	0.00081	0.002575	0.0042	9.009E-07	0.0009492	0.8651	0.01	mg/L	N	0	0	Yes	No	Stable		0.00061	Y			N		N	No
				0.400	0.44	0.40		dix-IV: Barium, To	,,	0.4040		,			_			0. 11									
CCR-AP-7	17/17	0%	-	0.138	0.14	0.19	0.19	0.0006529	0.02555	0.1848	2	mg/L	N	0	0	No	No	Stable	Non-parametric				0.990		2.000		
WAP-1	14/14	0%	-	0.546	0.485	0.9185	0.99	0.0381	0.1952	0.3572	2	mg/L	N	0	0	Yes	No	Stable						N.			No.
WAP-2RR	14/14	0%	-	0.0417	0.041	0.0704	0.086	0.0002828	0.01682	0.4032	2	mg/L	N	0	0	No	No	Decreasing		0.043	Y			N		N	No
WAP-3S	14/14	0%	-	0.207	0.21	0.364	0.39	0.01319	0.1149	0.5554	2	mg/L	N	0	0	No Yes	No No	Stable		0.024	Y			N N		N N	No No
WAP-4S	14/14	0%	-	0.0569	0.056	0.06895 0.0617	0.08	0.00006259	0.007912 0.005177	0.1391	2	mg/L	N N	0	0	No	No	Decreasing Stable		0.054	Y			N N		N	No
WAP-5S	14/14	0%	-	0.0542	0.053	0.0617				0.09548		mg/L	IN	U	U	NO	NO	Stable		0.052	Y			IV		IN	NO
CCR-AP-7	7/17	59%	0.001-0.001	0.000691	0.001	0.001	0.00075	1.648E-07	0.000406	0.5875	0.004	ma/l	N	0	0	No	No	Stable									
WAP-1	7/17 12/14	14%	0.001-0.001	0.000567	0.000455	0.001	0.00073	1.435E-07	0.000408	0.6686	0.004	mg/L mg/L	N	0	0	No	No	Stable	Non-parametric				0.001		0.004		
WAP-2RR	2/14	86%	0.001-0.001	0.000307	0.001	0.00107	0.0012	6.435E-07	0.0003788	0.0000	0.004		N	0	0	Yes	No	Stable		0.001	N			N		N	No
WAP-3S	1/14	93%	0.001-0.001	0.000901	0.001	0.001	0.00037	6.204E-08	0.0002337	0.2669	0.004	mg/L mg/L	N	0	0	No	No	Stable		0.001	N			N		N	No
WAP-4S	0/14	100%	0.001-0.001	0.000	0.001	0.001	0.000008	0.2041-08	0.0002431	0.2003	0.004	mg/L	N	0	0	NA NA	NA NA	NA		0.001	N			N		N	No
WAP-5S	1/14	93%	0.001-0.001	0.0001	0.001	0.001	0.000084	5.993E-08	0.0002448	0.262	0.004	mg/L	N	0	0	No	No	Stable		0.001	N			N		N	No
WAI 55	1/14	3370	0.001 0.001	0.000333	0.001	0.001		x-IV: Cadmium, 1		0.202	0.004	1116/ 2	.,	Ü	<u> </u>	NO	NO			0.001	14			- 14		.,	110
CCR-AP-7	2/17	88%	0.001-0.001	0.000909	0.001	0.001	0.00032	6.641E-08	0.0002577	0.2834	0.005	mg/L	N	0	0	No	No	Stable									
WAP-1	7/14	50%	0.001-0.001	0.000643	0.000745	0.001	0.00049	1.461E-07	0.0003822	0.5945	0.005	mg/L	N	0	0	No	No	Stable	Non-parametric				0.0010		0.005		
WAP-2RR	12/14	14%	0.001-0.001	0.000543	0.00044	0.001	0.001	6.728E-08	0.0002594	0.4778	0.005	mg/L	N	0	0	No	No	Stable		0.0004	٧			N		N	No
WAP-3S	9/14	36%	0.001-0.001	0.000496	0.00023	0.001	0.0003	1.527E-07	0.0003908	0.7872	0.005	mg/L	N	0	0	No	No	Stable		0.0010	N			N		N	No
WAP-4S	2/14	86%	0.001-0.001	0.000888	0.001	0.001	0.00025	8.145E-08	0.0002854	0.3214	0.005	mg/L	N	0	0	Yes	No	Stable		0.0010	N			N		N	No
WAP-5S	1/14	93%	0.001-0.001	0.000939	0.001	0.001	0.00015	5.161E-08	0.0002272	0.2419	0.005	mg/L	N	0	0	No	No	Stable		0.0010	N			N		N	No
							CCR Appendi	x-IV: Chromium,	Total (mg/L)																		
CCR-AP-7	11/17	35%	0.0014-0.002	0.00367	0.002	0.00876	0.019	0.00001852	0.004304	1.172	0.1	mg/L	N	0	0	Yes	No	Stable					0.007				
WAP-1	13/14	7%	0.0022-0.0022	0.0163	0.013	0.04405	0.046	0.0001834	0.01354	0.8291	0.1	mg/L	N	0	0	Yes	No	Stable	-Log-transformed				0.037		0.100		
WAP-2RR	2/14	86%	0.002-0.002	0.00241	0.002	0.00466	0.0057	0.000001207	0.001099	0.4551	0.1	mg/L	N	0	0	Yes	No	Stable		0.0020	N			N		N	No
WAP-3S	3/14	79%	0.002-0.0029	0.0021	0.002	0.002935	0.003	2.202E-07	0.0004692	0.2235	0.1	mg/L	N	0	0	Yes	No	Stable		0.0020	N			N		N	No
WAP-4S	1/14	93%	0.002-0.002	0.00192	0.002	0.002	0.00088	8.96E-08	0.0002993	0.1559	0.1	mg/L	N	0	0	No	No	Stable		0.0020	N			N		N	No
WAP-5S	0/14	100%	0.002-0.002	0.002	0.002	0.002		0	0	0	0.1	mg/L	N	0	0	NA	NA	NA		0.002	N			N		N	No
								dix-IV: Cobalt, To																			
CCR-AP-7	17/17	0%	-	0.00276	0.0012	0.00732	0.015	0.00001328	0.003645	1.319	0.006	mg/L	Υ	1	0	Yes	No	Decreasing	l og-transformed				0.021		0.021		
WAP-1	14/14	0%	-	0.00676	0.00525	0.0177	0.019	0.00003101	0.005569	0.8238	0.006	mg/L	Y	5	0	No	No	Stable	Log Garisionneo				0.021		0.021		
WAP-2RR	14/14	0%	-	0.00269	0.0021	0.007425	0.0097	0.000005924	0.002434	0.9036	0.006	mg/L	Y	2	0	Yes	No	Stable		0.00320	Y			N		N	No
WAP-3S	14/14	0%	-	0.000879	0.00069	0.00167	0.0018	2.596E-07	0.0005095	0.5795	0.006	mg/L	N	0	0	No	No	Stable		0.00140	Y			N		N	No
WAP-4S	14/14	0%	-	0.00236	0.00185	0.004945	0.0093	0.000004132	0.002033	0.8624	0.006	mg/L	Y	1	0	Yes	No	Stable		0.00180	Y			N		N	No
WAP-5S	14/14	0%	-	0.00758	0.00795	0.009335	0.0094	0.00000393	0.001982	0.2616	0.006	mg/L	Υ	13	0	Yes	No	Stable		0.00740	Y			N		N	No
								endix-III: Fluoride																			
CCR-AP-7	17/17	0%	-	1.056	1.12	1.402	1.48	0.018428	0.27148	1.028	4	mg/L	N	0	0	Yes	No	Stable	Normal				0.366		4.000		
WAP-1	14/14	0%	-	1.468	1.1	5.632	8	0.8628	1.8576	5.06	4	mg/L	N	0	0	Yes	Yes	Stable									
WAP-2RR	14/14	0%	-	0.824	0.86	1.21	1.28	0.014204	0.23836	1.1588	4	mg/L	N	0	0	No	No	Stable		0.320	Y			N		N	No
WAP-3S	14/14	0%	-	2.168	2.16	3.066	3.08	0.10128	0.6364	1.174	4	mg/L	N	0	0	No	No	Stable		0.760	Y			Υ		N	No
WAP-4S	14/14	0%	-	0.792	0.82	0.986	1	0.007416	0.17224	0.8708	4	mg/L	N	0	0	No	No	Stable		0.220	Y			N		N	No
WAP-5S	13/14	7%	0.1-0.1	0.428	0.4	0.756	0.84	0.005028	0.14184	1.3236	4	mg/L	N	0	0	Yes	No	Stable		0.100	Y			N		N	No

Prepared: July 19, 2021

																										Exceedance	
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 Well*	May 2021 Concentration (mg/L)	Detect?	LCL (mg/L)	Upper Tolerance Limit (mg/L)	SSI	GWPS (Higher of MCL/RSL or Upper Tolerance Limit) mg/L	above Background at Individual Well	t SSL May 2021
000 40 7		2001			0.0014	0.04005				1000					•			0.11									
CCR-AP-7	12/17	29%	0.001-0.001	0.00364	0.0014	0.01096	0.02	0.00002474	0.004974	1.366	0.015	mg/L	Y	1	0	Yes	No	Stable	- Non-parametrio				0.035		0.035		
WAP-1	14/14	0%	-	0.0126	0.00965	0.03435	0.035	0.0001162	0.01078	0.8565	0.015	mg/L	Y	3	0	No	No	Stable									
WAP-2RR	6/14	57%	0.001-0.001	0.00157	0.001	0.00588	0.0064	0.000003675	0.001917	1.223	0.015	mg/L	N	0	0	Yes	No	Stable		0.00130	Y			N		N	No
WAP-3S	13/14	7%	0.001-0.001	0.000854	0.000725	0.002115	0.0027	4.717E-07	0.0006868	0.8039	0.015	mg/L	N	0	0	Yes	No	Stable		0.00074	Y			N		N	No
WAP-4S	3/14	79%	0.001-0.001	0.000869	0.001	0.001	0.0007	8.052E-08	0.0002838	0.3267	0.015	mg/L	N	0	0	Yes	No	Stable		0.00100	N			N		N	No
WAP-5S	2/14	86%	0.001-0.001	0.000897	0.001	0.001	0.00036	6.935E-08	0.0002633	0.2935	0.015	mg/L	N	0	0	NA	NA	NA		0.00020	Υ			N		N	No
								lix-IV: Lithium, To	tal (mg/L)																		
CCR-AP-7	17/17	0%	-	0.0151	0.012	0.0238	0.039	0.00005337	0.007306	0.4853	0.04	mg/L	N	0	0	Yes	No	Stable	Non-parametric				0.039		0.039		
WAP-1	14/14	0%	-	0.0139	0.0115	0.02505	0.027	0.00003656	0.006046	0.4348	0.04	mg/L	N	0	0	No	No	Stable									
WAP-2RR	14/14	0%	-	0.0339	0.0325	0.05935	0.06	0.0002505	0.01583	0.4665	0.04	mg/L	Y	5	0	No	No	Decreasing		0.0320	Υ	0.0259		N		N	No
WAP-3S	14/14	0%	-	0.0639	0.064	0.09155	0.1	0.0004358	0.02087	0.3265	0.04	mg/L	Υ	11	0	No	No	Increasing		0.0850	Υ	0.0520		Υ		Y	Yes
WAP-4S	9/14	36%	0.005-0.005	0.00844	0.005	0.01635	0.017	0.00002344	0.004841	0.5734	0.04	mg/L	N	0	0	No	No	Decreasing		0.0050	N			N		N	No
WAP-5S	4/14	71%	0.005-0.05	0.00887	0.005	0.0279	0.016	0.0001491	0.01221	1.376	0.04	mg/L	N	0	1	Yes	No	Stable		0.0050	N			N		N	No
							CCR Append	ix-IV: Mercury, To	otal (mg/L)																		
CCR-AP-7	0/14	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA	A1				0.0003		0.000		
WAP-1	0/12	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		0.000		
WAP-2RR	0/12	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	0/12	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	0/13	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-5S	0/12	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
	-,						CCR Appendix-	IV: Molybdenum,	Total (mg/L)			O.															
CCR-AP-7	17/17	0%	-	0.00434	0.0028	0.00964	0.013	0.00001088	0.003298	0.7608	0.1	mg/L	N	0	0	No	No	Decreasing									
WAP-1	13/14	7%	0.005-0.005	0.00177	0.00135	0.00357	0.0028	0.000001371	0.001171	0.6598	0.1	mg/L	N	0	0	No	No	Stable	Log-transformed				0.009		0.009		
WAP-2RR	14/14	0%	-	0.0516	0.041	0.1086	0.16	0.001321	0.03635	0.7039	0.1	mg/L	Y	1	0	Yes	No	Stable		0.0810	γ			Υ		N	No
WAP-3S	14/14	0%	-	0.902	0.95	1.305	1.5	0.1034	0.3216	0.3565	0.1	mg/L	Y	14	0	No	No	Stable		1.0000	Y	0.7290		Y		Y	Yes
WAP-4S	14/14	0%	-	0.396	0.425	0.5	0.5	0.01578	0.1256	0.3174	0.1	mg/L	Y	13	0	Yes	No	Increasing		0.4800	Y	0.7250		Y		Y	Yes
WAP-43	13/14	7%	0.005-0.005	0.0297	0.0008	0.1433	0.4	0.01376	0.1066	3.588	0.1	mg/L	Y	1	0	Yes	No	Stable		0.4800	Y	0.3230		N		N	No
WAP-33	13/14	770	0.003-0.003	0.0297	0.0008			-IV: Radium-226 8		3.300	0.1	IIIg/L		1	U	res	NU			0.001	Ť			14		L N	NU
CCD AD 7	45/40	170/		1.50	1 000				, . ,	1.013	-	/I	v		2	No	Ne	NI A									
CCR-AP-7	15/18	17%	5-5	1.59	1.008	5	1.72	2.597	1.611	1.013	5	mg/L	Y	6	3	No No	No No	NA NA	- Non-parametrio				5.00		5.000		
WAP-1	12/14	14%	5-5	2.03	1.42	5	4.74	2.517	1.586	0.781	5	mg/L		3	2	110	110										
WAP-2RR	6/12	50%	5-5	2.8	2.939	5	0.878	5.301	2.302	0.8228	5	mg/L	N	0	6	No	No	Stable		0.517	Υ			N		N	No
WAP-3S	11/14	21%	5-5	1.89	1.085	5	1.38	2.869	1.694	0.8963	5	mg/L	Y	6	3	Yes	No	Stable		5.000	N			N		N	No
WAP-4S	6/14	57%	5-5	3.15	5	5	1.21	4.949	2.225	0.7064	5	mg/L	Y	1	8	No	No	Stable		5.000	N			N		N	No
WAP-5S	5/14	64%	5-5	3.38	5	5	0.648	5.086	2.255	0.6671	5	mg/L	N	0	9	No	No	Stable		5.000	N			N		N	No
								x-IV: Selenium, To																			
CCR-AP-7	3/15	80%	0.005-0.005	0.00426	0.005	0.005	0.0028	0.000002604	0.001614	0.3789	0.05	mg/L	N	0	0	Yes	NA	NA	Non-parametric				0.005		0.005		
WAP-1	2/12	83%	0.005-0.005	0.00447	0.005	0.005	0.0018	0.000001552	0.001246	0.2789	0.05	mg/L	N	0	0	Yes	NA	NA									
WAP-2RR	2/12	83%	0.005-0.005	0.00485	0.005	0.005	0.0049	2.391E-07	0.000489	0.1008	0.05	mg/L	N	0	0	Yes	No	NA		0.0049	Υ			N		N	No
WAP-3S	0/12	100%	0.005-0.005	0.005	0.005	0.005		1.478E-20	1.216E-10	2.432E-08	0.05	mg/L	N	0	0	NA	NA	NA		0.005	N			N		N	No
WAP-4S	0/12	100%	0.005-0.005	0.005	0.005	0.005		1.478E-20	1.216E-10	2.432E-08	0.05	mg/L	N	0	0	NA	NA	NA		0.005	N			N		N	No
WAP-5S	0/12	100%	0.005-0.005	0.005	0.005	0.005		1.478E-20	1.216E-10	2.432E-08	0.05	mg/L	N	0	0	NA	NA	NA		0.005	N			N		N	No
							CCR Append	ix-IV: Thallium, To	otal (mg/L)																		
CCR-AP-7	4/17	76%	0.001-0.001	0.000814	0.001	0.001	0.00061	1.323E-07	0.0003637	0.4466	0.002	mg/L	N	0	0	No	No	NA	Non narrantii				0.001		0.001		
WAP-1	11/14	21%	0.001-0.001	0.000455	0.00034	0.001	0.00063	1.115E-07	0.0003339	0.7346	0.002	mg/L	N	0	0	No	No	NA	- Non-parametric				0.001		0.001		
WAP-2RR	10/14	29%	0.001-0.001	0.000421	0.00025	0.001	0.00047	1.558E-07	0.0003947	0.9378	0.002	mg/L	N	0	0	No	No	NA		0.000	Υ			N		N	No
WAP-3S	0/14	100%	0.001-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.001	N			N		N	No
WAP-4S	0/14	100%	0.001-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.001	N			N		N	No
WAP-5S	2/14	86%	0.001-0.001	0.000881	0.001	0.001	0.00022	9.241E-08	0.000304	0.3452	0.002	mg/L	N	0	0	No	No	NA		0.001	N			N		N	No
	-/											J.			-												

																									GWPS (Higher of	Exceedance	
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 Well*	November 2021 Concentration (mg/L)	Detect?	LCL (mg/L)	Upper Tolerance Limit (mg/L)	SSI	MCL/RSL or Upper Tolerance Limit) mg/L	above Background at Individual Well	SSL t November 2021
							CCR Appendi	x-IV: Antimony,	Total (mg/L)				,,,,							, , ,			, ,			weii	
CCR-AP-7	3/19	84%	0.002-0.002	0.00177	0.002	0.002	0.00083	3.136E-07	0.00056	0.3166	0.006	mg/L	N	0	0	No	No	NA	N				0.002		0.005		
WAP-1	7/15	53%	0.002-0.002	0.00153	0.002	0.002	0.0018	3.691E-07	0.0006075	0.3973	0.006	mg/L	N	0	0	No	No	Decreasing	Non-parametri				0.002		0.006		
WAP-2RR	0/15	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	1/15	93%	0.002-0.002	0.0019	0.002	0.002	0.00043	1.643E-07	0.0004054	0.2139	0.006	mg/L	N	0	0	NA	NA	NA		0.002	N			N		N	No
WAP-4S	0/15	100%	0.002-0.02	0.0032	0.002	0.0074		0.0000216	0.004648	1.452	0.006	mg/L	N	0	0	NA	NA	NA		0.020	N			Y		Y	No
WAP-5S	0/15	100%	0.002-0.0021	0.00201	0.002	0.00203	CCR Annend	6.667E-10 lix-IV: Arsenic, T	0.00002582	0.01287	0.006	mg/L	N	0	U	NA	NA	NA		0.002	N			IN		N	No
CCR-AP-7	19/19	0%	-	0.00656	0.0062	0.0153	0.018	0.0000175	0.004183	0.6375	0.01	mg/L	Υ	2	0	Yes	No	Stable									
WAP-1	15/15	0%	-	0.00871	0.0066	0.0222	0.025	0.00004408	0.006639	0.7619	0.01	mg/L	Y	4	0	No	No	Stable	Non-parametri				0.025		0.025		
WAP-2RR	14/15	7%	0.001-0.001	0.0017	0.00092	0.00647	0.0078	0.000004651	0.002157	1.267	0.01	mg/L	N	0	0	Yes	No	Stable		0.00130	Υ			N		N	No
WAP-3S	15/15	0%	-	0.0025	0.0023	0.00458	0.0064	0.000002047	0.001431	0.5734	0.01	mg/L	N	0	0	Yes	No	Decreasing		0.00065	Υ			N		N	No
WAP-4S	15/15	0%	-	0.00399	0.0042	0.00561	0.0061	0.000001683	0.001297	0.3252	0.01	mg/L	N	0	0	Yes	No	Stable		0.00460	Υ			N		N	No
WAP-5S	13/15	13%	0.001-0.001	0.00107	0.00076	0.00245	0.0042	8.471E-07	0.0009204	0.8596	0.01	mg/L	N	0	0	Yes	No	Stable		0.00070	Υ			N		N	No
		001		0.405	0.40	0.40		lix-IV: Barium, T		0.407								0.11									
CCR-AP-7 WAP-1	19/19	0%	-	0.135	0.13	0.19	0.19	0.0007055 0.03662	0.02656 0.1914	0.197	2	mg/L	N N	0	0	No	No	Stable	Non-parametri				0.990		2.000		
WAP-1	15/15 15/15	0%	-	0.537	0.46	0.913	0.99	0.03662	0.1914	0.3561	2	mg/L mg/L	N N	0	0	Yes	No No	Stable Decreasing		0.057	Υ			N		N	No
WAP-3S	15/15	0%	-	0.195	0.041	0.362	0.39	0.0002782	0.01008	0.6161	2	mg/L	N	0	0	No	No	Stable		0.057	Y			N N		N N	No
WAP-4S	15/15	0%	-	0.0559	0.056	0.0681	0.08	0.00007092	0.008422	0.1506	2	mg/L	N	0	0	Yes	No	Decreasing		0.027				N		N	No
WAP-5S	15/15	0%	-	0.0537	0.053	0.0616	0.063	0.00002938	0.00542	0.101	2	mg/L	N	0	0	No	No	Decreasing		0.046	Y			N		N	No
							CCR Appendi	x-IV: Beryllium,	Total (mg/L)																		
CCR-AP-7	7/19	63%	0.001-0.001	0.000724	0.001	0.001	0.00075	0.00000156	0.000395	0.5459	0.004	mg/L	N	0	0	No	No	Stable	Non-parametri				0.001		0.004		
WAP-1	12/15	20%	0.001-0.001	0.000595	0.00049	0.00106	0.0012	1.457E-07	0.0003818	0.6412	0.004	mg/L	N	0	0	No	No	Stable	Non-parametri	-			0.001		0.004		
WAP-2RR	2/15	87%	0.001-0.001	0.000907	0.001	0.001	0.00037	6.041E-08	0.0002458	0.2709	0.004	mg/L	N	0	0	Yes	No	Stable		0.001	N			N		N	No
WAP-3S	1/15	93%	0.001-0.001	0.000938	0.001	0.001	0.000068	5.791E-08	0.0002406	0.2566	0.004	mg/L	N	0	0	No	No	Stable		0.001	N			N		N	No
WAP-4S	0/15	100%	0.001-0.001	0.001	0.001	0.001	0.000004	0	0.0002365	0	0.004	mg/L	N	0	0	NA No	NA	NA		0.001	N			N		N N	No No
WAP-5S	1/15	93%	0.001-0.001	0.000939	0.001	0.001	0.000084	5.594E-08 x-IV: Cadmium,		0.2519	0.004	mg/L	N	U	U	INO	No	Stable		0.001	N			IN		IN	NO
CCR-AP-7	2/19	89%	0.001-0.001	0.000919	0.001	0.001	0.00032	5.984E-08	0.0002446	0.2662	0.005	mg/L	N	0	0	No	No	Stable									
WAP-1	7/15	53%	0.001-0.001	0.000667	0.001	0.001	0.00049	1.441E-07	0.0003796	0.5695	0.005	mg/L	N	0	0	No	No	Stable	Non-parametri				0.0010		0.005		
WAP-2RR	13/15	13%	0.001-0.001	0.000535	0.00044	0.001	0.001	6.348E-08	0.000252	0.4712	0.005	mg/L	N	0	0	No	No	Stable		0.0004	Υ			N		N	No
WAP-3S	9/15	40%	0.001-0.001	0.00053	0.00024	0.001	0.0003	1.587E-07	0.0003984	0.7517	0.005	mg/L	N	0	0	No	No	Stable		0.0010	N			N		N	No
WAP-4S	2/15	87%	0.001-0.001	0.000895	0.001	0.001	0.00025	7.647E-08	0.0002765	0.3089	0.005	mg/L	N	0	0	Yes	No	Stable		0.0010	N			N		N	No
WAP-5S	1/15	93%	0.001-0.001	0.000943	0.001	0.001	0.00015	4.817E-08	0.0002195	0.2327	0.005	mg/L	N	0	0	No	No	Stable		0.0010	N			N		N	No
000 40 7		400/			0.000	0.00740		c-IV: Chromium,		4.45								0.11									
CCR-AP-7 WAP-1	11/19	42% 7%	0.0014-0.002 0.0022-0.0022	0.0035	0.002	0.00748	0.019	0.00001674 0.0001817	0.004092 0.01348	1.17 0.8715	0.1	mg/L	N N	0	0	Yes	No No	Stable Stable	Non-parametri				0.046		0.100		
WAP-2RR	14/15 2/15	87%	0.0022-0.0022	0.00239	0.002	0.0458	0.0057	0.0001817	0.001064	0.4459	0.1	mg/L mg/L	N	0	0	Yes	No	Stable		0.0020	N			N		N	No
WAP-3S	3/15	80%	0.002-0.0029	0.00209	0.002	0.00293	0.0037	2.051E-07	0.0004529	0.2164	0.1	mg/L	N	0	0	Yes	No	Stable		0.0020	N N			N		N	No
WAP-4S	1/15	93%	0.002-0.002	0.00193	0.002	0.002	0.00088	8.363E-08	0.0002892	0.1502	0.1	mg/L	N	0	0	No	No	Stable		0.0020	N			N		N	No
WAP-5S	0/15	100%	0.002-0.002	0.002	0.002	0.002		0	0	0	0.1	mg/L	N	0	0	NA	NA	NA		0.002	N			N		N	No
							CCR Appen	dix-IV: Cobalt, To	otal (mg/L)																		
CCR-AP-7	19/19	0%	-	0.00254	0.0011	0.00636	0.015	0.00001225	0.0035	1.378	0.006	mg/L	Y	1	0	Yes		Decreasing	Non-parametri				0.019		0.019		
WAP-1	15/15	0%	-	0.00642	0.0047	0.0176	0.019	0.0000305	0.005523	0.8599	0.006	mg/L	Y	5	0	No	No	Stable									4
WAP-2RR	15/15	0%	-	0.0027	0.0022	0.00725	0.0097	0.000005501	0.002345	0.8685	0.006	mg/L	Y	2	0	Yes	No	Stable		0.00280	Y			N		N	No
WAP-3S WAP-4S	15/15 15/15	0%	-	0.000894	0.00071 0.0019	0.00166 0.00461	0.0018	2.443E-07 0.000003837	0.0004943 0.001959	0.5529 0.8324	0.006	mg/L mg/L	N Y	0 1	0	No Yes	No No	Stable Stable		0.00110 0.00230	Y			N N		N N	No No
WAP-5S	15/15	0%	-	0.00253	0.0079	0.00933	0.0094	0.000003649	0.001933	0.252	0.006	mg/L	Y	14	0	Yes	No	Stable		0.00230	Y			N		N	No
								endix-IV: Fluorid				, o								0.00700	•						
CCR-AP-7	19/19	0%	-	1.152	1.16	1.77		0.039492	0.39744	1.378	4	mg/L	N	0	0	Yes	No	Stable	Manual				0.422		4.000		
WAP-1	15/15	0%	-	1.492	1.12	5.212		0.8048	1.7944	4.816	4	mg/L	N	0	0	Yes	Yes	Stable	Normal				0.433		4.000		
WAP-2RR	15/15	0%	-	0.864	0.92	1.368		0.019356	0.27824	1.288	4	mg/L	N	0	0	No	No	Stable		0.360	Υ			N		N	No
WAP-3S	15/15	0%	-	2.204	2.2	3.062		0.09852	0.6276	1.14	4	mg/L	N	0	0	No	No	Stable		0.670	Υ			Y		N	No
WAP-4S	15/15	0%	-	0.812	0.88	1.066		0.008644	0.18596	0.9144	4	mg/L	N	0	0	No	No	Stable		0.280	Y			N		N	No
WAP-5S	14/15	7%	0.1-0.1	0.424	0.4	0.732	con c	0.004748	0.13784	1.2996	4	mg/L	N	0	0	Yes	No	Stable		0.091	Υ			N		N	No
CCR-AP-7	12/10	32%	0.001-0.001	0.00332	0.001	0.00983	O.02	0.00002296	0.004791	1.444	0.015	ma/I	Y	1	0	Yes	No	Stable									
WAP-1	13/19 15/15	0%	-	0.00332	0.001	0.00983	0.02	0.00002296	0.01072	0.901	0.015	mg/L mg/L	Y	3	0	No	No	Stable	Non-parametri				0.035		0.035		
WAP-2RR	7/15	53%	0.001-0.001	0.0015	0.001	0.00584	0.0064	0.0000143	0.001864	1.241	0.015	mg/L	N	0	0	Yes	No	Stable		0.00059	Y			N		N	No
WAP-3S	14/15	7%	0.001-0.001	0.000822	0.00071	0.00207	0.0027	4.536E-07	0.0006735	0.8193	0.015	mg/L	N	0	0	Yes	No	Stable		0.00037	Y			N		N	No
WAP-4S	4/15	73%	0.001-0.001	0.000819	0.001	0.001	0.0007	1.111E-07	0.0003334	0.4069	0.015	mg/L	N	0	0	Yes	No	Stable		0.00013	Y			N		N	No
WAP-5S	2/15	87%	0.001-0.001	0.000904	0.001	0.001	0.00036	6.51E-08	0.0002551	0.2822	0.015	mg/L	N	0	0	NA	NA	NA		0.00100	N			N		N	No
																-											

Vectren West Ash Pond

November 2021 Sampling Event

Assessment Monitoring Statistical Analysis Summary

Prepared: January 12, 2022

																									GWPS (Higher of	Exceedance	
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 Well*	November 2021 Concentration (mg/L)	Detect?	LCL (mg/L)	Upper Tolerance Limit (mg/L)	SSI	MCL/RSL or Upper Tolerance Limit) mg/L	above Background a Individual Well	SSL November 2021
							CCR Appen	dix-IV: Lithium, To	otal (mg/L)																		
CCR-AP-7	19/19	0%	-	0.0145	0.011	0.0219	0.039	0.00005068	0.007119	0.4926	0.04	mg/L	N	0	0	Yes	No	Decreasing	Non-parametri				0.039		0.040		
WAP-1	15/15	0%	-	0.0134	0.011	0.0249	0.027	0.00003801	0.006165	0.4605	0.04	mg/L	N	0	0	No	No	Stable									
WAP-2RR	15/15	0%	-	0.0334	0.032	0.0593	0.06	0.0002368	0.01539	0.4608	0.04	mg/L	Y	5	0	No	No	Decreasing	3	0.0260	Υ	0.0259		N		N	No
WAP-3S	15/15	0%	-	0.0648	0.066	0.0909	0.1	0.000416	0.0204	0.3148	0.04	mg/L	Y	12	0	No	No	Increasing		0.0770	Υ	0.0520		Y		Y	Yes
WAP-4S	9/15	40%	0.005-0.005	0.00821	0.005	0.0163	0.017	0.00002256	0.004749	0.5782	0.04	mg/L	N	0	0	No	No	Decreasing	3	0.0050	N			N		N	No
WAP-5S	4/15	73%	0.005-0.05	0.00861	0.005	0.0262	0.016	0.0001395 lix-IV: Mercury, To	0.01181	1.371	0.04	mg/L	N	0	1	Yes	No	Stable		0.0050	N			N		N	No
CCR-AP-7	0/16	100%	0.0002-0.0002	0.0002	0.0002	0.0002	CCK Append	0	0 (mg/L)	0	0.002	mg/L	N	0	0	NA	NA	NA.									
WAP-1	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 NA	NA NA	Non-parametri				0.0002		0.002		
WAP-2RR	0/13	100%	0.0002-0.0002	0.0002	0.0002	0.0002		0	0	0	0.002	mg/L	N	0	0	NA NA	NA	NA NA		0.0002	N			N		N	No
WAP-3S	0/13	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	0/14	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-5S	0/13	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
							CCR Appendix	IV: Molybdenum	, Total (mg/L)																		
CCR-AP-7	19/19	0%	-	0.00406	0.0026	0.00922	0.013	0.00001036	0.003219	0.7934	0.1	mg/L	N	0	0	No	No	Decreasing							0.400		
WAP-1	14/15	7%	0.005-0.005	0.0017	0.0013	0.00346	0.0028	0.00000135	0.001162	0.6823	0.1	mg/L	N	0	0	No	No	Stable	Non-parametri				0.013		0.100		
WAP-2RR	15/15	0%	-	0.0549	0.042	0.118	0.16	0.001383	0.03719	0.6778	0.1	mg/L	Y	2	0	Yes	No	Stable		0.1000	Υ			Υ		N	No
WAP-3S	15/15	0%	-	0.905	0.95	1.29	1.5	0.09621	0.3102	0.3426	0.1	mg/L	Υ	15	0	No	No	Stable		0.9500	Υ	0.7290		Υ		Y	Yes
WAP-4S	15/15	0%	-	0.4	0.43	0.5	0.5	0.01493	0.1222	0.3054	0.1	mg/L	Y	14	0	Yes	No	Increasing		0.4600	Υ	0.3250		Υ		Y	Yes
WAP-5S	14/15	7%	0.005-0.005	0.0278	0.00081	0.1235	0.4	0.0106	0.103	3.704	0.1	mg/L	Y	1	0	Yes	No	Stable		0.001	Υ			N		N	No
								-IV: Radium-226 8																			
CCR-AP-7	15/19	21%	5-5	1.77	1.02	5	1.72	3.064	1.75	0.9888	5	pCi/L	N	0	0	No	No	NA	Non-parametri				5.00		5.000		
WAP-1	12/15	20%	5-5	2.23	1.48	5	4.74	2.925	1.71	0.7672	5	pCi/L	N	0	0	No	No	NA									
WAP-2RR	9/15	40%	5-5	2.52	1.53	5	2.15	4.598	2.144	0.8515	5	pCi/L	N	0	0	No	No	Stable		2.150	Υ			N		N	No
WAP-3S	11/15	27%	5-5	2.1	1.09	5	1.38	3.309	1.819	0.8674	5	pCi/L	N	0	0	Yes	No	Stable		5.000	N			N		N	No
WAP-4S WAP-5S	6/15 6/15	60%	5-5 5-5	3.27	5	5	1.21 0.677	4.824 5.21	2.196	0.6711 0.7132	5	pCi/L pCi/L	N N	0	0	No No	No No	Stable Stable		5.000	N			N N		N N	No No
WAP-33	0/15	00%	3-3	3.2	3	3		ix-IV: Selenium, T		0.7132	3	рсі/с	IN	0	U	INO	NO	Stable		0.677	Υ			IN		14	NO
CCR-AP-7	3/17	82%	0.005-0.005	0.00435	0.005	0.005	0.0028	0.000002339	0.001529	0.3519	0.05	mg/L	N	0	0	Yes	NA	NA									
WAP-1	2/13	85%	0.005-0.005	0.00451	0.005	0.005	0.0018	0.000001444	0.001202	0.2666	0.05	mg/L	N	0	0	Yes	NA	NA	Non-parametri				0.005		0.050		
WAP-2RR	2/13	85%	0.005-0.005	0.00486	0.005	0.005	0.0049	2.209E-07	0.00047	0.09668	0.05	mg/L	N	0	0	Yes	No	NA		0.0050	N			N		N	No
WAP-3S	0/13	100%	0.005-0.005	0.005	0.005	0.005		1.807E-20	1.344E-10	2.688E-08	0.05	mg/L	N	0	0	NA	NA	NA		0.005	N			N		N	No
WAP-4S	0/13	100%	0.005-0.005	0.005	0.005	0.005		1.807E-20	1.344E-10	2.688E-08	0.05	mg/L	N	0	0	NA	NA	NA		0.005	N			N		N	No
WAP-5S	0/13	100%	0.005-0.005	0.005	0.005	0.005		1.807E-20	1.344E-10	2.688E-08	0.05	mg/L	N	0	0	NA	NA	NA		0.005	N			N		N	No
							CCR Append	ix-IV: Thallium, T	otal (mg/L)																		
CCR-AP-7	4/19	79%	0.001-0.001	0.000834	0.001	0.001	0.00061	0.00000121	0.0003479	0.4172	0.002	mg/L	N	0	0	No	No	NA	Non-parametri				0.001		0.002		
WAP-1	11/15	27%	0.001-0.001	0.000491	0.00041	0.001	0.00063	1.234E-07	0.0003512	0.7155	0.002	mg/L	N	0	0	No	No	NA	ivon-parametri				0.001		0.002		
WAP-2RR	10/15	33%	0.001-0.001	0.00046	0.00027	0.001	0.00047	1.671E-07	0.0004087	0.8894	0.002	mg/L	N	0	0	No	No	NA		0.001	N			N		N	No
WAP-3S	0/15	100%	0.001-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.001	N			N		N	No
WAP-4S	0/15	100%	0.001-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.001	N			N		N	No
WAP-5S	2/15	87%	0.001-0.001	0.000889	0.001	0.001	0.00022	8.676E-08	0.0002945	0.3314	0.002	mg/L	N	0	0	No	No	NA		0.001	N			N		N	No

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 Number of Exceedances Detection (Y/N) Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	May 2022 Distribution Well* Concentration (mg/L)	Detect? LCL (mg/L)	Upper Tolerance Limit (mg/L)	SSI
CCR-AP-7 WAP-1	3/20 8/16	85% 50%	0.002-0.002 0.002-0.002	0.00178 0.00156	0.002 0.002	0.002 0.002	0.00083 0.002	-IV: Antimony, 2.998E-07 3.583E-07	Total (mg/L) 0.0005475 0.0005986	0.3075 0.384	0.006	mg/L mg/L	N 0 N 0	0	No No	No No	NA Stable	— Non-parametric		0.002	
WAP-2RR WAP-3S	0/16 1/16	100% 94%	0.002-0.002 0.002-0.002 0.002-0.002	0.00130 0.002 0.0019	0.002 0.002 0.002	0.002	0.00043	0 1.541E-07	0 0.0003925	0.2064	0.006 0.006	mg/L mg/L	N 0 N 0	0	NA No	NA No	NA NA	0.002 0.002	N N		N N
WAP-4S WAP-5S	0/16 0/16	100% 100%	0.002-0.02 0.002-0.0021	0.00313 0.00201	0.002 0.002	0.0065 0.002025		0.00002025 6.25E-10	0.0045 0.000025	1.44 0.01246	0.006 0.006	mg/L mg/L	N 0 N 0	1 0	NA NA	NA NA	NA NA	0.002 0.002	N N		N N
WAP-6S WAP-7S	1/9 6/9	89% 33%	0.002-0.002 0.002-0.002	0.00185 0.00132	0.002 0.0013	0.002 0.002	0.00066	1.995E-07 3.246E-07	0.0004467 0.0005697	0.2413 0.4302	0.006 0.006	mg/L mg/L	N 0 N 0	0	No No	No No	NA No	0.002 0.001	N Y		N N
CCR-AP-7	20/20	0%	-	0.00627	0.006	0.01515	0.018	0.00001832	0.00428	0.683	0.01	mg/L	Y 2	0	Yes	No	Stable	Non-parametric		0.025	
WAP-1 WAP-2RR WAP-3S	16/16 15/16 16/16	0% 6% 0%	0.001-0.001	0.00872 0.00166 0.00236	0.00695 0.000935 0.00225	0.022 0.006375 0.00445	0.025 0.0078 0.0064	0.00004114 0.000004372 0.000002209	0.006414 0.002091 0.001486	0.7357 1.261 0.6301	0.01 0.01 0.01	mg/L mg/L mg/L	N 0 N 0	0	Yes Yes Yes	No No	Stable Stable Decrease	0.00100 0.00031	Y		N
WAP-4S WAP-5S	16/16 14/16	0% 12%	- 0.001-0.001	0.00412 0.00103	0.00425 0.00073	0.0061 0.002325	0.0061 0.0042	0.000001849 8.195E-07	0.00136 0.0009053	0.33	0.01	mg/L mg/L	N 0 N 0	0	Yes	No No	Stable Stable	0.006 0.000	Y		N N
WAP-6S WAP-7S	9/9 9/9	0% 0%	-	0.00169 0.00538	0.001 0.004	0.00396 0.01172	0.0046 0.014	0.00001868 0.00001546	0.001367 0.003932	0.8076 0.7311	0.01 0.01	mg/L mg/L	N 0 Y 1	0	No No	No No	Stable Stable	0.002 0.007	Y Y		N N
CCR-AP-7	20/20	0%	-	0.132	0.13	0.19	0.19	x-IV: Barium, T 0.0008415	0.02901	0.2199	2	mg/L	N 0	0	No	No	Stable	Non-parametric		0.990	
WAP-1 WAP-2RR WAP-3S	16/16 16/16	0% 0% 0%	-	0.534 0.0416 0.184	0.475 0.041 0.185	0.9075	0.99	0.03432	0.1853 0.01671 0.1231	0.3467 0.4015 0.6669	2 2	mg/L mg/L	N 0 N 0	0 0	Yes No	No No	Stable Stable Stable	0.025	Y		N
WAP-4S WAP-5S	16/16 16/16 16/16	0% 0% 0%	-	0.056 0.0533	0.185 0.056 0.053	0.36 0.06725 0.0615	0.39 0.08 0.063	0.01514 0.00006627 0.00002943	0.00814 0.005425	0.1454 0.1018	2 2	mg/L mg/L mg/L	N 0 N 0	0	No Yes No	No No	Decrease Decrease	0.030 0.057 0.048	Y		N N
WAP-6S WAP-7S	9/9	0%	-	0.0716 0.0602	0.068 0.047	0.11 0.1268	0.11	0.000605 0.001786	0.0246 0.04226	0.3438 0.7017	2	mg/L mg/L	N 0 N 0	0	No Yes	No No	Stable Decrease	0.074 0.046	Y		N N
CCR-AP-7	7/20	65%	0.001-0.001	0.000737	0.001			-IV: Beryllium, 1.516E-07		0.5281	0.004	mg/L	N 0	0	No	No	Stable			0.001	
WAP-1 WAP-2RR	13/16 2/16	19% 88%	0.001-0.001 0.001-0.001	0.000576 0.000913	0.000455 0.001	0.00105 0.001	0.0012 0.00037	1.422E-07 5.692E-08	0.0003771 0.0002386	0.6551 0.2613	0.004 0.004	mg/L mg/L	N 0 N 0	0	No No	No No	Stable NA	— Non-parametric 0.001	N	0.001	N
WAP-3S WAP-4S	1/16 0/16	94%	0.001-0.001 0.001-0.001	0.000942	0.001	0.001	0.000068	5.429E-08 0	0.000233	0.2474	0.004	mg/L mg/L	N 0 N 0	0	No NA	No NA	NA NA	0.001 0.001	N N		N N
WAP-5S WAP-6S	1/16 2/9	94% 78%	0.001-0.001	0.000943	0.001 0.001	0.001	0.000084	5.244E-08 8.705E-08	0.000229	0.2429 0.3449	0.004	mg/L mg/L	N 0 N 0	0	No No	No No	NA NA	0.001 0.001	N N		N N
WAP-7S CCR-AP-7	1/9 2/20	90%	0.001-0.001	0.000914	0.001	0.001	0.00023 CCR Appendix 0.00032	6.588E-08 -IV: Cadmium, 5.702E-08	0.0002567 Total (mg/L) 0.0002388	0.2807	0.004	mg/L mg/L	N 0	0	No No	No No	NA NA	0.001	N		IN
WAP-1 WAP-2RR	7/16 14/16	56% 12%	0.001-0.001 0.001-0.001	0.00053	0.001 0.001 0.00044	0.001	0.00032 0.00049 0.001	1.415E-07 5.96E-08	0.0002388 0.0003761 0.0002441	0.5471 0.4606	0.005	mg/L mg/L	N 0	0	No No	No No	Stable Stable	Non-parametric 0.0005	Y	0.0010	N
WAP-3S WAP-4S	9/16 2/16	44% 88%	0.001-0.001 0.001-0.001	0.000559 0.000902	0.00027 0.001	0.001 0.001	0.0003 0.00025	0.00000162 7.206E-08	0.0004024 0.0002684	0.7194 0.2976	0.005 0.005	mg/L mg/L	N 0 N 0	0	No No	No No	Stable	0.0010 0.001	N N		N N
WAP-5S WAP-6S	1/16 1/9	94% 89%	0.001-0.001 0.001-0.001	0.000947 0.000914	0.001 0.001	0.001 0.001	0.00015 0.00023	4.516E-08 6.588E-08	0.0002125 0.0002567	0.2244 0.2807	0.005 0.005	mg/L mg/L	N 0 N 0	0	No No	No No	NA NA	0.001 0.001	N N		N N
WAP-7S	1/9	89%	0.001-0.001	0.000934	0.001			3.868E-08		0.2105	0.005	mg/L	N 0	0	No	No	NA	0.001	N		N
CCR-AP-7 WAP-1	11/20 15/16	45% 6%	0.0014-0.002	0.00342	0.002 0.0115	0.00684	0.019	0.00001597 0.0001714	0.003997	1.168 0.8657	0.1	mg/L mg/L	N 0 N 0	0	Yes No	No No	Stable Stable	— Non-parametric		0.046	
WAP-2RR WAP-3S	2/16 3/16	88% 81%	0.002-0.002	0.00236	0.002	0.0045	0.0057	0.000001066 0.000000192	0.001033	0.4371 0.2099	0.1	mg/L mg/L	N 0 N 0	0	No Yes	No No	Stable Stable	0.0020 0.0020	N N		N N
WAP-4S WAP-5S WAP-6S	1/16 0/16 2/9	94% 100% 78%	0.002-0.002 0.002-0.002 0.002-0.002	0.00193 0.002 0.00316	0.002 0.002 0.002	0.002 0.002 0.00762	0.00088	7.84E-08 0 0.00000636	0.00028 0 0.002522	0.1451 0 0.7992	0.1 0.1 0.1	mg/L mg/L mg/L	N 0 N 0 N 0	0 0	No No Yes	No No	NA NA	0.002 0.002 0.002	N N		N N
WAP-7S	1/9	89%	0.002-0.002	0.00227	0.002	0.00344	0.0044	0.00000064 ix-IV: Cobalt, T	0.0008	0.3529	0.1	mg/L	N 0	0	No	No	NA	0.002	N		N
CCR-AP-7 WAP-1	19/20 16/16	5% 0%	0.0005-0.0005	0.00244 0.00625	0.00105 0.0047	0.00588 0.0175	0.015 0.019	0.00001182 0.00002893	0.003437 0.005379	1.41 0.8603	0.006 0.006	mg/L mg/L	Y 1 Y 5	0	Yes No	No No	Decrease Stable	— Non-parametric		0.019	
WAP-2RR WAP-3S	16/16 16/16	0% 0%	-	0.00267 0.000881	0.0022 0.0007	0.007075 0.00165	0.0097 0.0018	0.00000515 2.306E-07	0.002269 0.0004802	0.8502 0.5449	0.006 0.006	mg/L mg/L	Y 2 N 0	0	Yes No	No No	Stable Stable	0.00220 0.00069	Y Y		N N
WAP-4S WAP-5S	16/16 16/16	0% 0%	-	0.00231 0.00748	0.00185 0.00785	0.004275 0.009325	0.0093 0.0094	0.000003608 0.000003562	0.001899 0.001887	0.8214 0.2523	0.006 0.006	mg/L mg/L	Y 1 Y 15	0	Yes	No No	Stable Stable	0.002 0.006	Y		N N
WAP-6S WAP-7S	9/9 8/9	0% 11%	0.0005-0.0005	0.00206 0.002	0.0013 0.00031	0.00562 0.009344	0.0069 0.015	0.000004065 0.00002383	0.002016	0.9803 2.446	0.006	mg/L mg/L	Y 1 Y 1	0	Yes	No No	Stable Stable	0.001 0.001	Y N		N N
CCR-AP-7 WAP-1	20/20 16/16	0%	-	1.24 1.648	1.16 1.12	2.31 5.8	2.88 8	o.07376 0.848	0.5432 1.842	1.7524 4.472	4	mg/L mg/L	N 0	0	Yes	No No	Increase Stable	— Normal		2.000	
WAP-2RR WAP-3S	16/16 16/16	0%	-	0.912 2.216	0.92	1.512 3.058	1.6 3.08	0.026296 0.09276	0.32432 0.6092	1.4256 1.1	4	mg/L mg/L	N 0 N 0	0	No No	No No	Increase Stable	0.400 0.600	Y Y		N N
WAP-4S WAP-5S	16/16 15/16	0% 6%	- 0.1-0.1	0.804 0.404	0.82 0.398	1.054 0.708	1.12 0.84	0.00854 0.005844	0.18484 0.15288	0.9212 1.5088	4	mg/L mg/L	N 0 N 0	0	No Yes	No No	Stable Stable	0.160 0.030	Y		N N
WAP-6S WAP-7S	9/9 9/9	0% 0%	-	1.712 1.228	1.72 1.16	1.96 2.44	1.96 2.44	0.00572 0.0978	0.15128 0.6256	0.3536 2.0396	4	mg/L mg/L	N 0 N 0	0	No No	No No	Stable Stable	0.370 0.110	Y		N N
CCR-AP-7	13/20	35%	0.001-0.001	0.0032	0.001	0.009265	0.02	0.00002202	0.004692	1.465	0.015	mg/L	Y 1	0	Yes	No	Stable	— Non-parametric		0.035	
WAP-1 WAP-2RR WAP-3S	16/16 7/16	0% 56% 12%	0.001-0.001 0.001-0.001	0.0118 0.00147 0.000833	0.00965 0.001 0.000725	0.03425 0.0058 0.002025	0.035 0.0064 0.0027	0.0001073 0.00000326 4.253E-07	0.01036 0.001806 0.0006522	0.8748 1.228 0.7828	0.015 0.015 0.015	mg/L mg/L	N 0	0 0	No Yes	No No	Stable Stable Stable	0.00100	N N		N N
WAP-4S WAP-5S	14/16 4/16 2/16	75% 88%	0.001-0.001 0.001-0.001 0.001-0.001	0.000831	0.00723 0.001 0.001	0.002023 0.001 0.001	0.0027 0.0007 0.00036	1.058E-07 6.133E-08	0.0003252 0.0003252 0.0002477	0.7828 0.3915 0.2721	0.015 0.015	mg/L mg/L mg/L	N 0	0	Yes No No	No No	Stable Stable	0.00100 0.001 0.001	N N		N N
WAP-6S WAP-7S	8/9 5/9	11% 44%	0.001-0.001 0.001-0.001	0.00129	0.00044 0.001	0.0048 0.00316	0.0062	0.000004041 0.000001854	0.00201	1.557 1.244	0.015 0.015	mg/L mg/L	N 0 N 0	0	Yes	No No	Stable Stable	0.000 0.001	Y		N N
CCR-AP-7	20/20	0%	-	0.0141	0.011	0.02095	O.039	x-IV: Lithium, T 0.00005065	otal (mg/L) 0.007117	0.5051	0.04	mg/L	N 0	0	Yes	No	Decrease	— Non-parametric		0.039	
WAP-1 WAP-2RR	16/16 16/16	0% 0%	-	0.0132 0.0329	0.0105 0.0305	0.02475 0.05925	0.027 0.06	0.00003619 0.0002245	0.006016 0.01498	0.4566 0.4549	0.04 0.04	mg/L mg/L	N 0 Y 5	0	No No	No No	Stable Decrease	0.0260	Υ	0.033	N
WAP-3S WAP-4S	16/16 10/16	38%	0.005-0.005	0.0657	0.068	0.09025	0.1	0.0004009	0.02002	0.3048	0.04	mg/L mg/L	Y 13 N 0	0	No No	No No	Decrease Challeton	0.0790 0.001	Y		Y N
WAP-5S WAP-6S WAP-7S	5/16 5/9 9/9	69% 44% 0%	0.005-0.05 0.005-0.005	0.00816 0.00544 0.142	0.005 0.005 0.13	0.0245 0.00932 0.182	0.016 0.011 0.19	0.0001334 0.00000536 0.0008444	0.01155 0.002315 0.02906	1.415 0.4252 0.2043	0.04 0.04 0.04	mg/L mg/L mg/L	N 0 N 0 Y 9	0	Yes Yes No	No No	Stable Stable	0.001 0.003 0.160	Y		N N
CCR-AP-7	0/17	100%	0.0002-0.0002	0.0002	0.0002			c-IV: Mercury,		0.2043	0.002	mg/L	N 0	0	NA	NA	NA		·		
WAP-1 WAP-2RR	0/14 0/14	100% 100%	0.0002-0.0002 0.0002-0.0002	0.0002 0.0002	0.0002 0.0002	0.0002 0.0002		0	0	0	0.002 0.002	mg/L mg/L	N 0 N 0	0	NA NA	NA NA	NA NA	— Non-parametric 0.0002	N	0.0002	N
WAP-3S WAP-4S	0/14 0/15	100% 100%	0.0002-0.0002 0.0002-0.0002	0.0002 0.0002	0.0002 0.0002	0.0002 0.0002		0	0	0	0.002 0.002	mg/L mg/L	N 0 N 0	0	NA NA	NA NA	NA NA	0.0002 0.000	N N		N N
WAP-5S WAP-6S	0/14	100%	0.0002-0.0002 0.0002-0.0002	0.0002	0.0002	0.0002		0	0	0	0.002	mg/L mg/L	N 0 N 0	0	NA NA	NA NA	NA NA	0.000	N N		N N
WAP-7S CCR-AP-7	0/9 20/20	100%	0.0002-0.0002	0.0002	0.0002	0.0002 CC 0.00901	R Appendix-IN	0 /: Molybdenun 0.00001017	0 n, Total (mg/L) 0.003189	0	0.002	mg/L mg/L	N 0	0	NA No	NA No	NA Decrease	0.000	N		N
WAP-1 WAP-2RR	20/20 15/16 16/16	6% 0%	0.005-0.005	0.00393 0.00167 0.0566	0.00255 0.00125 0.046	0.00901 0.00335 0.115	0.013 0.0028 0.16	0.00001017 0.000001276 0.001337	0.003189 0.001129 0.03656	0.8126 0.6758 0.6464	0.1 0.1 0.1	mg/L mg/L mg/L	N 0 N 0 Y 2	0 0	Yes Yes	No No	Stable Increase	Non-parametric0.0820	Υ	0.013	Y
WAP-3S WAP-4S	16/16 16/16	0% 0%	-	0.896 0.407	0.935 0.43	1.275 0.5025	1.5 0.51	0.09131 0.01469	0.3022 0.1212	0.3374	0.1	mg/L mg/L	Y 16 Y 15	0	No Yes	No No	Stable Increase	0.7500 0.510	Y		Y
WAP-5S WAP-6S	14/16 9/9	12% 0%	0.005-0.005	0.0264 0.151	0.000835 0.16	0.1037 0.176	0.4 0.18	0.009929 0.0005361	0.09964 0.02315	3.778 0.1532	0.1 0.1	mg/L mg/L	Y 1 Y 9	0	Yes No	No No	Stable Stable	0.005 0.110	N Y		Y
WAP-7S	9/9	0%	-	0.242	0.25	0.316 CO		0.003369 V: Radium-226		0.2396	0.1	mg/L	Υ 9	0	No	No	Stable	0.230	Υ		Υ
CCR-AP-7 WAP-1	15/20 13/16	25% 19% 44%	5-5 5-5	1.93 2.17	1.065 1.42 1.84	5	1.72 4.74 2.15	3.424 2.791 4.676	1.851 1.671 2.162	0.958 0.7708 0.8089	5	pCi/L pCi/L	N 0 N 0	0	No No	No No	Stable Stable	— Non-parametric	N	5.00	N
WAP-2RR WAP-3S WAP-4S	9/16 12/16 7/16	44% 25% 56%	5-5 5-5 5-5	2.67 2.01 3.1	1.84 1.085 5	5	2.15 1.38 1.21	4.676 3.221 4.966	2.162 1.795 2.229	0.8089 0.8947 0.7183	5	pCi/L pCi/L pCi/L	N 0 N 0 N 0	0 0	No No	No No	Stable Stable Stable	5.000 0.639 0.547	N Y Y		N N
WAP-5S WAP-6S	7/16 7/16 5/9	56% 44%	5-5 5-5	3.05 2.63	5 0.985	5	0.789 0.985	5.226 5.09	2.286 2.256	0.7496 0.8591	5	pCi/L pCi/L	N 0 N 0	0	No No	No No	Stable Stable	0.789 5.000	Y		N N
WAP-7S	6/9	33%	5-5	2.16	0.631	5	1.81	4.701 -IV: Selenium,	2.168	1.002	5	pCi/L	N 0	0	No	No	Stable	0.559	Υ		N
CCR-AP-7 WAP-1	3/18 2/14	83% 86%	0.005-0.005 0.005-0.005	0.00438 0.00454	0.005 0.005	0.005 0.005	0.0028 0.0018	0.000002225 0.00000135	0.001492 0.001162	0.3404 0.2558	0.05 0.05	mg/L mg/L	N 0 N 0	0	Yes No	NA NA	NA NA	— Non-parametric		0.005	
WAP-2RR WAP-3S	3/14 0/14	79% 100%	0.005-0.005 0.005-0.005	0.00469	0.005 0.005	0.005 0.005	0.0049	6.367E-07 1.251E-20	0.0007979 1.118E-10	0.1703 2.237E-08	0.05 0.05	mg/L mg/L	N 0 N 0	0	No NA	No NA	NA NA	0.0024 0.005	Y N		N N
WAP-4S WAP-5S	0/14	100% 100%	0.005-0.005 0.005-0.005	0.005	0.005 0.005	0.005 0.005		1.251E-20 1.251E-20	1.118E-10 1.118E-10	2.237E-08 2.237E-08	0.05	mg/L mg/L	N 0 N 0	0	NA NA	NA NA	NA NA	0.005 0.005	N N		N N
WAP-6S WAP-7S	0/9 3/9	100% 67%	0.005-0.005 0.005-0.005	0.005 0.00542	0.005 0.005	0.005 0.0104	0.014	6.776E-21 0.00001232 c-IV: Thallium,	8.232E-11 0.003511	1.646E-08 0.6482	0.05	mg/L mg/L	N 0 N 0	0	NA No	NA No	NA Stable	0.005 0.001	N Y		N N
CCR-AP-7 WAP-1	4/20 11/16	80% 31%	0.001-0.001 0.001-0.001	0.000842 0.000523	0.001 0.00044	0.001		0.00000116 1.313E-07	0.0003406 0.0003624	0.4045 0.6933	0.002	mg/L mg/L	N 0 N 0	0	No No	No No	NA Stable	— Non-parametric		0.001	
WAP-2RR WAP-3S	10/16 10/16 0/16	38% 100%	0.001-0.001 0.001-0.001 0.001-0.001	0.000323 0.000493 0.001	0.00044 0.000285 0.001	0.001 0.001 0.001	0.00063	1.742E-07 0	0.0003624	0.846	0.002 0.002 0.002	mg/L mg/L	N 0 N 0	0	No NA	No NA	Stable NA	0.001 0.001	N N		N N
WAP-4S WAP-5S	0/16 2/16	100% 88%	0.001-0.001 0.001-0.001	0.001 0.000896	0.001 0.001	0.001 0.001	0.00022	0 8.175E-08	0 0.0002859	0 0.3192	0.002 0.002	mg/L mg/L	N 0 N 0	0	NA No	NA No	NA NA	0.001 0.001	N N		N N
WAP-6S WAP-7S	2/9 3/9	78% 67%	0.001-0.001 0.001-0.001	0.000849 0.000754	0.001 0.001	0.001 0.001	0.00041 0.00038	9.194E-08 1.382E-07	0.0003032 0.0003718	0.3572 0.4928	0.002 0.002	mg/L mg/L	N 0 N 0	0	No No	No No	NA Stable	0.001 0.001	N N		N N

Notes and Abbreviations:

mg/L = milligrams per liter
 pCi/L = picocuries per liter

JULY 2022

APPENDIX B

Laboratory Reports



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-125560-1 Client Project/Site: West Ash Pond

For:

Haley & Aldrich, Inc. 465 Medford St Suite 2200 Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Kuntll Hage

Authorized for release by: 9/13/2021 9:59:33 AM

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@Eurofinset.com

..... Links

Review your project results through

Total Access

Have a Question?



Visit us at: www.eurofinsus.com/Env PA Lab ID: 02-00416

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Haley & Aldrich, Inc. Project/Site: West Ash Pond Laboratory Job ID: 180-125560-1

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Case Narrative

Client: Haley & Aldrich, Inc.

Job ID: 180-125560-1

Project/Site: West Ash Pond

Job ID: 180-125560-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-125560-1

Comments

Final Pending completion of Radiological analyses.

No additional comments.

Receipt

The samples were received on 8/10/2021 10:30 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 was 4.8° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described 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 180-125560-2

Comments

No additional comments.

Receipt

The samples were received on 8/10/2021 10:30 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 was 4.8° C.

RAD

Methods 903.0, 9315: Radium 226 prep batch 160-522532:

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 (180-125560-1), WAP-9I (180-125560-2), WAP-9D (180-125560-3), (LCS 160-522532/1-A), (LCSD 160-522532/2-A) and (MB 160-522532/10-A)

Method 9320: Radium 228 Prep batch 160-522541:

The detection goal was not met for the following sample(s). Sample was prepped at a reduced aliquot due to the presence of matrix interferences: WAP-9S (180-125560-1). Analytical results are reported with the detection limit achieved.

Methods 904.0, 9320: Radium 228 Prep batch 160-522541:

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 (180-125560-1), WAP-9I (180-125560-2), WAP-9D (180-125560-3), (LCS 160-522541/1-A), (LCSD 160-522541/2-A) and (MB 160-522541/10-A)

Method PrecSep 0: Ra-228 Batch 160-522541:

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: WAP-9I (180-125560-2) and WAP-9D (180-125560-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep 0: Ra-228 Batch 160-522541:

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Case Narrative

Client: Haley & Aldrich, Inc.

Job ID: 180-125560-1

Project/Site: West Ash Pond

Job ID: 180-125560-1 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

The following samples were prepared at a reduced aliquot due to Matrix: WAP-9S (180-125560-1). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Ra-226 Batch 160-522532:

Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: WAP-9I (180-125560-2) and WAP-9D (180-125560-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Ra-226 Batch 160-522532:

The following samples were prepared at a reduced aliquot due to Matrix: WAP-9S (180-125560-1). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

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

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Definitions/Glossary

Client: Haley & Aldrich, Inc.

Job ID: 180-125560-1

Project/Site: West Ash Pond

Qualifiers

Metals

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

Qualifier Qualifier Description

G The Sample MDC is greater than the requested RL.
U Result is less than the sample detection limit.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Job ID: 180-125560-1

Laboratory: Eurofins TestAmerica, 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	06-27-21 *
California	State	2891	04-30-22
Connecticut	State	PH-0688	09-30-22
Florida	NELAP	E871008	08-31-21
Georgia	State	PA 02-00416	08-31-21
Illinois	NELAP	004375	08-31-21
Kansas	NELAP	E-10350	08-31-21
Kentucky (UST)	State	162013	04-30-22
Kentucky (WW)	State	KY98043	12-31-21
Louisiana	NELAP	04041	08-31-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	08-31-21
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	04-05-22
New Jersey	NELAP	PA005	08-31-21
New York	NELAP	11182	08-31-21
North Carolina (WW/SW)	State	434	12-31-21
North Dakota	State	R-227	08-31-21
Oregon	NELAP	PA-2151	08-31-21
Pennsylvania	NELAP	02-00416	08-31-21
Rhode Island	State	LAO00362	12-31-21
South Carolina	State	89014	04-30-22
Texas	NELAP	T104704528	08-31-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	08-31-21
Virginia	NELAP	10043	09-14-21
West Virginia DEP	State	142	08-31-21
Wisconsin	State	998027800	08-26-21

Laboratory: Eurofins TestAmerica, 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	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	06-30-21 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	004553	11-30-21
lowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-21
Kentucky (DW)	State	KY90125	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21

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

Eurofins TestAmerica, Pittsburgh

9/13/2021

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Job ID: 180-125560-1

Laboratory: Eurofins TestAmerica, 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	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-21
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-22
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	03-01-22
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-21 *
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-21 *
West Virginia DEP	State	381	10-31-22

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

Eurofins TestAmerica, Pittsburgh

Sample Summary

Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Job ID: 180-125560-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-125560-1	WAP-9S	Water	08/04/21 15:00	08/10/21 10:30
180-125560-2	WAP-9I	Water	08/04/21 16:05	08/10/21 10:30
180-125560-3	WAP-9D	Water	08/04/21 17:00	08/10/21 10:30

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Method Summary

Client: Haley & Aldrich, Inc. Project/Site: West Ash Pond

Job ID: 180-125560-1

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

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:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Eurofins TestAmerica, Pittsburgh

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1.

Client: Haley & Aldrich, Inc. Job ID: 180-125560-1 Project/Site: West Ash Pond

Client Sample ID: WAP-9S Lab Sample ID: 180-125560-1

Date Collected: 08/04/21 15:00 **Matrix: Water** Date Received: 08/10/21 10:30

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 at ID: CHIC2100A	_ Kuii	1	Amount	Amount	368501	08/19/21 15:14		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A tt ID: A		1	50 mL	50 mL	367811 368509	08/12/21 11:09 08/18/21 16:15		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A tt ID: HGZ		1	25 mL	25 mL	367793 368001	08/12/21 10:20 08/13/21 12:25		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			367783	08/12/21 10:35	SMW	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	367709	08/11/21 17:13	PMH	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 tt ID: GFPCBLUE		1	499.72 mL	1.0 g	522532 526070	08/13/21 10:51 09/09/21 17:18		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 et ID: GFPCBLUE		1	499.72 mL	1.0 g	522541 526070	08/13/21 11:19 09/09/21 13:05		TAL SL TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			526410	09/10/21 19:20	ЕМН	TAL SL

Client Sample ID: WAP-9I Lab Sample ID: 180-125560-2 Date Collected: 08/04/21 16:05 **Matrix: Water**

Date Received: 08/10/21 10:30

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			368501	08/19/21 15:46	SAB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: A		1	50 mL	50 mL	367811 368509	08/12/21 11:09 08/18/21 16:30		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGZ		1	25 mL	25 mL	367793 368001	08/12/21 10:20 08/13/21 12:26		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			367783	08/12/21 11:35	SMW	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	367709	08/11/21 17:13	PMH	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCRED		1	1000.25 mL	1.0 g	522532 526075	08/13/21 10:51 09/09/21 17:21		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCBLUE		1	1000.25 mL	1.0 g	522541 526070	08/13/21 11:19 09/09/21 13:05		TAL SL TAL SL

Eurofins TestAmerica, Pittsburgh

9/13/2021

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Client: Haley & Aldrich, Inc.

Job ID: 180-125560-1

Project/Site: West Ash Pond

Client Sample ID: WAP-9I Lab Sample ID: 180-125560-2

Date Collected: 08/04/21 16:05

Date Received: 08/10/21 10:30

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 526410 09/10/21 19:20 EMH TAL SL

Client Sample ID: WAP-9D

Date Collected: 08/04/21 17:00

Lab Sample ID: 180-125560-3

Matrix: Water

Date Received: 08/10/21 10:30

	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: CHIC2100A		1			368501	08/19/21 10:19	SAB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	367811	08/12/21 11:09	TLP	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			368509	08/18/21 16:34	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	367793	08/12/21 10:20	MM1	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGZ		1			368001	08/13/21 12:29	KEM	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			367783	08/12/21 12:05	SMW	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	367709	08/11/21 17:13	PMH	TAL PIT
Total/NA	Prep	PrecSep-21			999.17 mL	1.0 g	522532	08/13/21 10:51	MJ	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCRED		1			526075	09/09/21 17:22	ANW	TAL SL
Total/NA	Prep	PrecSep_0			999.17 mL	1.0 g	522541	08/13/21 11:19	MJ	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCBLUE		1			526070	09/09/21 13:05	ANW	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228		1			526410	09/10/21 19:20	ЕМН	TAL SL

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Job ID: 180-125560-1

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Analyst References:

Lab: TAL PIT

Batch Type: Prep

MM1 = Mary Beth Miller

TLP = Tara Peterson

Batch Type: Analysis

KEM = Kimberly Mahoney

PMH = Paloma Hoelzle

RSK = Robert Kurtz

SAB = Sharon Bacha

SMW = Shelby Walters

Lab: TAL SL

Batch Type: Prep

MJ = Mary Johns

Batch Type: Analysis

ANW = Aamber Woods

EMH = Elizabeth Hoerchler

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Client: Haley & Aldrich, Inc. Job ID: 180-125560-1

Project/Site: West Ash Pond

Client Sample ID: WAP-9S Lab Sample ID: 180-125560-1

Date Collected: 08/04/21 15:00 Matrix: Water

Date Received: 08/10/21 10:30

Method: EPA 9056A	- Anions	•					_	_		
Analyte			Qualifier	RL		Unit	<u>D</u>	Prepared	Analyzed	Dil Fa
Chloride		33		1.0		mg/L			08/19/21 15:14	
Fluoride		0.86		0.10		mg/L			08/19/21 15:14	
Sulfate		99		1.0	0.76	mg/L			08/19/21 15:14	
Method: EPA 6020A Analyte	- Metals	•	otal Reco	verable RL	MDL	. Unit	D	Prepared	Analyzed	Dil Fa
Antimony		0.00097	J	0.0020	0.00038	mg/L		08/12/21 11:09	08/18/21 16:15	-
Arsenic		0.0076		0.0010	0.00031	mg/L		08/12/21 11:09	08/18/21 16:15	
Barium		0.20		0.010	0.0016	mg/L		08/12/21 11:09	08/18/21 16:15	
Beryllium		0.00047	J	0.0010	0.00018	mg/L		08/12/21 11:09	08/18/21 16:15	
Boron		2.7		0.080	0.039	mg/L		08/12/21 11:09	08/18/21 16:15	
Cadmium		0.0010		0.0010	0.00022	-		08/12/21 11:09	08/18/21 16:15	
Calcium		99		0.50	0.13	mg/L		08/12/21 11:09	08/18/21 16:15	
Chromium		0.015		0.0020	0.0015	-		08/12/21 11:09	08/18/21 16:15	
Cobalt		0.010		0.00050	0.00013	mg/L		08/12/21 11:09	08/18/21 16:15	
Lead		0.013		0.0010	0.00013	mg/L		08/12/21 11:09	08/18/21 16:15	
Lithium		0.022		0.0050	0.0034	mg/L		08/12/21 11:09	08/18/21 16:15	
Molybdenum		0.20		0.0050	0.00061	mg/L		08/12/21 11:09	08/18/21 16:15	
Selenium		ND		0.0050	0.0015	mg/L		08/12/21 11:09	08/18/21 16:15	
Thallium		0.00024	J	0.0010	0.00015	mg/L		08/12/21 11:09	08/18/21 16:15	
Method: EPA 7470A	- Mercur	v (CVAA)								
Analyte		• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Mercury		ND		0.00020	0.00013	mg/L		08/12/21 10:20	08/13/21 12:25	
General Chemistry										
Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids		540		10	10	mg/L			08/11/21 17:13	
Analyte		Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
pH		7.5	HF	0.1	0.1	SU			08/12/21 10:35	
Method: 9315 - Radiu	ım-226 ((GEPC)								
	((0.10)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	t	Prepared	Analyzed	Dil Fa
Radium-226	0.616	U	0.616	0.619	1.00	0.975 pCi/	L	08/13/21 10:51	09/09/21 17:18	
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fa
Ba Carrier	76.3		40 - 110						09/09/21 17:18	
: Method: 9320 - Radiu	220 ((CEDC)								
Wethou. 9320 - Rault	JIII-220 ((GFFC)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	t	Prepared	Analyzed	Dil Fa
Radium-228	-0.191		0.560	0.560	1.00	1.04 pCi/		<u> </u>	09/09/21 13:05	
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil F
Carrier Ba Carrier	%Yield 76.3	Qualifier	Limits 40 - 110					Prepared 08/13/21 11:19	Analyzed 09/09/21 13:05	Dil Fa

9/13/2021

Client: Haley & Aldrich, Inc. Job ID: 180-125560-1 Project/Site: West Ash Pond

Lab Sample ID: 180-125560-1 **Client Sample ID: WAP-9S**

Date Collected: 08/04/21 15:00 **Matrix: Water** Date Received: 08/10/21 10:30

Method: Ra226	Ra228 - Combined Radium-22	6 and Radium-228
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			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.425	U	0.832	0.835	5.00	1.04	pCi/L		09/10/21 19:20	1
+ 228										

Lab Sample ID: 180-125560-2 **Client Sample ID: WAP-9I** Date Collected: 08/04/21 16:05 **Matrix: Water**

Date Received: 08/10/21 10:30

Method: EPA 9056A - Anions, Ion Chromatography								
Analyte	Result Qualifi	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22	1.0	0.71	mg/L			08/19/21 15:46	1
Fluoride	0.15	0.10	0.026	mg/L			08/19/21 15:46	1
Sulfate	36	1.0	0.76	mg/L			08/19/21 15:46	1

Method: EPA 6020A - Metals	s (ICP/MS) - Total Recoverable	•
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Analyte	Result (Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.0020	0.00038	mg/L		08/12/21 11:09	08/18/21 16:30	1
Arsenic	0.0039	0.0010	0.00031	mg/L		08/12/21 11:09	08/18/21 16:30	1
Barium	0.086	0.010	0.0016	mg/L		08/12/21 11:09	08/18/21 16:30	1
Beryllium	ND	0.0010	0.00018	mg/L		08/12/21 11:09	08/18/21 16:30	1
Boron	0.096	0.080	0.039	mg/L		08/12/21 11:09	08/18/21 16:30	1
Cadmium	ND	0.0010	0.00022	mg/L		08/12/21 11:09	08/18/21 16:30	1
Calcium	40	0.50	0.13	mg/L		08/12/21 11:09	08/18/21 16:30	1
Chromium	ND	0.0020	0.0015	mg/L		08/12/21 11:09	08/18/21 16:30	1
Cobalt	0.00021 J	0.00050	0.00013	mg/L		08/12/21 11:09	08/18/21 16:30	1
Lead	ND	0.0010	0.00013	mg/L		08/12/21 11:09	08/18/21 16:30	1
Lithium	ND	0.0050	0.0034	mg/L		08/12/21 11:09	08/18/21 16:30	1
Molybdenum	0.018	0.0050	0.00061	mg/L		08/12/21 11:09	08/18/21 16:30	1
Selenium	ND	0.0050	0.0015	mg/L		08/12/21 11:09	08/18/21 16:30	1
Thallium	ND	0.0010	0.00015	mg/L		08/12/21 11:09	08/18/21 16:30	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/12/21 10:20	08/13/21 12:26	1

General Chemistry

Analyte	Result	Qualitier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	230		10	10	mg/L			08/11/21 17:13	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Radium-226	0.103	U	0.219	0.219	1.00	0.390	pCi/L	08/13/21 10:51	09/09/21 17:21	1
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			Count	iotai						

Ba Carrier 93.9 40 - 110 08/13/21 10:51 09/09/21 17:21

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Client: Haley & Aldrich, Inc. Job ID: 180-125560-1 Project/Site: West Ash Pond

Client Sample ID: WAP-9I Lab Sample ID: 180-125560-2

Date Collected: 08/04/21 16:05 **Matrix: Water** Date Received: 08/10/21 10:30

Method: 9320 -	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.198	U	0.227	0.228	1.00	0.373	pCi/L	08/13/21 11:19	09/09/21 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.9		40 - 110					08/13/21 11:19	09/09/21 13:05	1
Y Carrier	90.5		40 - 110					08/13/21 11:19	09/09/21 13:05	1

Method: Ra226_Ra2	228 - Con	nbined Ra	dium-226 a	nd Radium	-228					
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.301	U	0.315	0.316	5.00	0.390	pCi/L		09/10/21 19:20	1

Lab Sample ID: 180-125560-3 **Client Sample ID: WAP-9D** Date Collected: 08/04/21 17:00 **Matrix: Water** Date Received: 08/10/21 10:30

Method: EPA 9056A	- Anions, Ion Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21		1.0	0.71	mg/L			08/19/21 10:19	1
Fluoride	0.12		0.10	0.026	mg/L			08/19/21 10:19	1
Sulfate	41		1.0	0.76	mg/L			08/19/21 10:19	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00082	J	0.0020	0.00038	mg/L		08/12/21 11:09	08/18/21 16:34	1
Arsenic	0.0088		0.0010	0.00031	mg/L		08/12/21 11:09	08/18/21 16:34	1
Barium	0.21		0.010	0.0016	mg/L		08/12/21 11:09	08/18/21 16:34	1
Beryllium	ND		0.0010	0.00018	mg/L		08/12/21 11:09	08/18/21 16:34	1
Boron	0.066	J	0.080	0.039	mg/L		08/12/21 11:09	08/18/21 16:34	1
Cadmium	ND		0.0010	0.00022	mg/L		08/12/21 11:09	08/18/21 16:34	1
Calcium	40		0.50	0.13	mg/L		08/12/21 11:09	08/18/21 16:34	1
Chromium	0.0065		0.0020	0.0015	mg/L		08/12/21 11:09	08/18/21 16:34	1
Cobalt	0.0048		0.00050	0.00013	mg/L		08/12/21 11:09	08/18/21 16:34	1
Lead	0.0066		0.0010	0.00013	mg/L		08/12/21 11:09	08/18/21 16:34	1
Lithium	0.0050		0.0050	0.0034	mg/L		08/12/21 11:09	08/18/21 16:34	1
Molybdenum	0.0029	J	0.0050	0.00061	mg/L		08/12/21 11:09	08/18/21 16:34	1
Selenium	ND		0.0050	0.0015	mg/L		08/12/21 11:09	08/18/21 16:34	1
Thallium	ND		0.0010	0.00015	mg/L		08/12/21 11:09	08/18/21 16:34	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		08/12/21 10:20	08/13/21 12:29	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	230		10	10	mg/L			08/11/21 17:13	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.6	HE	0.1	0.1	SU			08/12/21 12:05	1

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Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-125560-1

Project/Site: West Ash Pond

Client Sample ID: WAP-9D Lab Sample ID: 180-125560-3 Date Collected: 08/04/21 17:00

Matrix: Water

Date Received: 08/10/21 10:30

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.327	U	0.246	0.247	1.00	0.357	pCi/L	08/13/21 10:51	09/09/21 17:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					08/13/21 10:51	09/09/21 17:22	1

Method: 9320 - F	Radium-228 ((GFPC)								
Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.539		0.251	0.256	1.00	0.362	pCi/L	08/13/21 11:19	09/09/21 13:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					08/13/21 11:19	09/09/21 13:05	1
Y Carrier	91.6		40 - 110					08/13/21 11:19	09/09/21 13:05	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.867		0.351	0.356	5.00	0.362	pCi/L		09/10/21 19:20	1

Client: Haley & Aldrich, Inc. Job ID: 180-125560-1

Method: EPA 9056A - Anions, Ion Chromatography

MD MD

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Lab Sample ID: MB 180-368501/6

Matrix: Water

Analysis Batch: 368501

Project/Site: West Ash Pond

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

	IVID	INID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			08/19/21 08:24	1
Fluoride	ND		0.10	0.026	mg/L			08/19/21 08:24	1
Sulfate	ND		1.0	0.76	mg/L			08/19/21 08:24	1
	Chloride Fluoride	Analyte Result Chloride ND Fluoride ND	AnalyteResult ChlorideQualifierFluorideND	Analyte Result Chloride Qualifier RL R	Analyte Result Oldride Qualifier RL ND MDL ND Fluoride ND 0.10 0.026	Analyte Result Chloride Qualifier RL ND MDL Unit Fluoride ND 1.0 0.71 mg/L Fluoride ND 0.10 0.026 mg/L	Analyte Result Chloride Qualifier RL ND MDL Unit Unit Unit Mg/L D Mg/L Fluoride ND 0.10 0.026 mg/L	Analyte Result Chloride Qualifier RL ND MDL Unit mg/L D mg/L Prepared Fluoride ND 0.10 0.026 mg/L mg/L	Chloride ND 1.0 0.71 mg/L 08/19/21 08:24 Fluoride ND 0.10 0.026 mg/L 08/19/21 08:24

Lab Sample ID: LCS 180-368501/5

Matrix: Water

Analysis Batch: 368501

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	51.9		mg/L		104	80 - 120	
Fluoride	2.50	2.49		mg/L		100	80 - 120	
Sulfate	50.0	53.9		mg/L		108	80 - 120	

Lab Sample ID: 180-125560-3 MS

Matrix: Water

Analysis Batch: 368501

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

Sample Sample Spike MS MS %Rec. Result Qualifier Added Result Qualifier Analyte Unit D %Rec Limits Chloride 21 50.0 72.2 mg/L 102 80 - 120 Fluoride 0.12 2.50 2.56 mg/L 98 80 - 120

92.4

mg/L

50.0

Lab Sample ID: 180-125560-3 MSD

Matrix: Water

Sulfate

Analysis Batch: 368501

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

80 - 120

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	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	21		50.0	75.0		mg/L		107	80 - 120	4	15
Fluoride	0.12		2.50	2.68		mg/L		102	80 - 120	4	15
Sulfate	41		50.0	96.0		mg/L		110	80 - 120	4	15

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

Lab Sample ID: MB 180-367811/1-A

Matrix: Water

Analysis Batch: 368509

Client Sample ID: Method Blank **Prep Type: Total Recoverable Prep Batch: 367811**

MB MB Result Qualifier RL **MDL** Unit n Dil Fac **Analyte** Prepared Analyzed Antimony ND 0.0020 0.00038 mg/L 08/12/21 11:09 08/18/21 15:06 Arsenic ND 0.0010 0.00031 mg/L 08/12/21 11:09 08/18/21 15:06 Barium ND 0.010 0.0016 mg/L 08/12/21 11:09 08/18/21 15:06 Beryllium ND 0.0010 0.00018 mg/L 08/12/21 11:09 08/18/21 15:06 ND 0.039 mg/L Boron 0.080 08/12/21 11:09 08/18/21 15:06 Cadmium ND 0.0010 0.00022 mg/L 08/12/21 11:09 08/18/21 15:06 ND 08/12/21 11:09 08/18/21 15:06 Calcium 0.50 0.13 mg/L Chromium ND 0.0020 0.0015 mg/L 08/12/21 11:09 08/18/21 15:06 Cobalt ND 0.00013 mg/L 0.00050 08/12/21 11:09 08/18/21 15:06 Lead ND 0.0010 0.00013 mg/L 08/12/21 11:09 08/18/21 15:06 Lithium ND 0.0050 0.0034 mg/L 08/12/21 11:09 08/18/21 15:06 Molybdenum ND 0.0050 0.00061 mg/L 08/12/21 11:09 08/18/21 15:06

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Client: Haley & Aldrich, Inc. Job ID: 180-125560-1

Project/Site: West Ash Pond

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

MB MB

MB MB

Matrix: Water

Analysis Batch: 368509

Lab Sample ID: MB 180-367811/1-A

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

Prep Batch: 367811

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.0050	0.0015	mg/L		08/12/21 11:09	08/18/21 15:06	1
Thallium	ND		0.0010	0.00015	mg/L		08/12/21 11:09	08/18/21 15:06	1

Lab Sample ID: LCS 180-367811/2-A **Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total Recoverable Analysis Batch: 368509 Prep Batch: 367811**

Spike LCS LCS %Rec. Added Result Qualifier Unit D %Rec Limits Analyte 0.250 0.248 mg/L 99 80 - 120 Antimony Arsenic 1.00 1.04 mg/L 104 80 - 120 Barium 103 1.00 1.03 mg/L 80 - 120 Beryllium 0.500 0.490 mg/L 98 80 - 120 Boron 1.25 1.19 mg/L 95 80 - 120 Cadmium 0.500 0.525 mg/L 105 80 - 120 Calcium 25.0 26.4 mg/L 106 80 - 120 Chromium 0.500 0.528 106 80 - 120 mg/L Cobalt 0.500 0.518 mg/L 104 80 - 120 Lead 0.500 0.529 106 80 - 120 mg/L Lithium 0.500 0.495 mg/L 99 80 - 120 Molybdenum 0.500 0.530 mg/L 106 80 - 120 Selenium 1.00 104 1.04 mg/L 80 - 120 Thallium 1.00 mg/L 105 80 - 120 1.05

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-367793/1-A

Matrix: Water

Analysis Batch: 368001

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

Client Sample ID: Lab Control Sample

Prep Batch: 367793

Prep Type: Total/NA

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Mercury ND 0.00020 0.00013 mg/L 08/12/21 10:20 08/13/21 12:13

Lab Sample ID: LCS 180-367793/2-A **Matrix: Water**

Analysis Batch: 368001

Prep Batch: 367793 Spike LCS LCS %Rec. Added Result Qualifier Unit %Rec Limits

Analyte 0.00250 Mercury 0.00241 mg/L 80 - 120

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-367783/1 **Client Sample ID: Lab Control Sample Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 367783

7 man, 010 = attorn 001 100								
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
pH	7.00	7.0		SU		100	99 - 101	

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Job ID: 180-125560-1

Prep Type: Total/NA

Client: Haley & Aldrich, Inc. Project/Site: West Ash Pond

Method: EPA 9040C - pH (Continued)

Lab Sample ID: 180-125560-1 DU Client Sample ID: WAP-9S

Matrix: Water

Analysis Batch: 367783

RPD Sample Sample DU DU Result Qualifier Result Qualifier Unit D RPD Limit Analyte 7.5 HF SU рН 7.5 0.5

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

Lab Sample ID: MB 180-367709/1 **Client Sample ID: Method Blank** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 367709

MB MB Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 10 Total Dissolved Solids $\overline{\mathsf{ND}}$ 10 mg/L 08/11/21 17:13

Lab Sample ID: LCS 180-367709/2 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 367709

Spike LCS LCS %Rec. Added Result Qualifier %Rec Limits Analyte Unit **Total Dissolved Solids** 685 704 mg/L 103 80 - 120

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-522532/10-A **Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA**

Analysis Batch: 526075

Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Analyzed Radium-226 0.1245 0.204 0.205 1.00 0.355 pCi/L 08/13/21 10:51 09/09/21 17:22 MB MB Carrier **%Yield Qualifier** Limits Prepared Analyzed Dil Fac Ba Carrier 91.7 40 - 110 08/13/21 10:51 09/09/21 17:22

Lab Sample ID: LCS 160-522532/1-A **Client Sample ID: Lab Control Sample**

Matrix: Water Prep Type: Total/NA Prep Batch: 522532 **Analysis Batch: 526071** Total

Spike LCS LCS Uncert. %Rec. Analyte Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits Radium-226 11.3 11.28 1.51 1.00 0.503 pCi/L 99 75 - 125

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 78.9 40 - 110

Lab Sample ID: LCSD 160-522532/2-A Client Sample ID: Lab Control Sample Dup **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 526070

Total Spike LCSD LCSD Uncert. %Rec. **RER** Added RL **MDC** Unit %Rec Analyte Result Qual $(2\sigma + / -)$ Limits RER Limit 1.00 0.328 pCi/L 0.11 Radium-226 11.3 10.99 1.24 97 75 - 125

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Prep Batch: 522532

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Prep Batch: 522532

Client: Haley & Aldrich, Inc. Job ID: 180-125560-1

Project/Site: West Ash Pond

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCSD 160-522532/2-A

Matrix: Water

Analysis Batch: 526070

LCSD LCSD

%Yield Qualifier Carrier Limits Ba Carrier 94.3 40 - 110 **Client Sample ID: Lab Control Sample Dup**

Prep Type: Total/NA

Prep Batch: 522532

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-522541/10-A

Matrix: Water

Analysis Batch: 526070

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 522541

MB MB Uncert. Uncert. Analyte RL **MDC** Unit Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ Prepared Analyzed Dil Fac Radium-228 0.214 1.00 0.348 pCi/L 08/13/21 11:19 09/09/21 13:05 0.1971 0.213

Total

ΜB MΒ

Carrier %Yield Qualifier Limits Prepared Dil Fac Analyzed Ba Carrier 40 - 110 08/13/21 11:19 09/09/21 13:05 91.7 40 - 110 Y Carrier 89.7 08/13/21 11:19 09/09/21 13:05

Lab Sample ID: LCS 160-522541/1-A

Matrix: Water

Analysis Batch: 526070

Client Sample ID: Lab Control Sample

%Rec.

Prep Type: Total/NA

Prep Batch: 522541

Total LCS LCS

Count

Spike Uncert. Analyte Added Result Qual $(2\sigma + / -)$

RL **MDC** Unit %Rec Limits Radium-228 9.35 8.830 1.08 1.00 0.460 pCi/L 94 75 - 125

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 78.9 40 - 110 Y Carrier 90.5 40 - 110

Lab Sample ID: LCSD 160-522541/2-A

Matrix: Water

Analysis Batch: 526070

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 522541

Total

LCSD LCSD %Rec. **RER** Spike Uncert. Added RL **MDC** Unit Analyte Result Qual $(2\sigma + / -)$ %Rec Limits RER Limit Radium-228 9.35 9.514 1.10 1.00 0.346 pCi/L 102 75 - 125 0.31

LCSD LCSD %Yield Qualifier Carrier Limits 94.3 40 - 110 Ba Carrier 92.3 40 - 110 Y Carrier

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QC Association Summary

Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Job ID: 180-125560-1

HPLC/IC

Analysis Batch: 368501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-125560-1	WAP-9S	Total/NA	Water	EPA 9056A	
180-125560-2	WAP-9I	Total/NA	Water	EPA 9056A	
180-125560-3	WAP-9D	Total/NA	Water	EPA 9056A	
MB 180-368501/6	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-368501/5	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-125560-3 MS	WAP-9D	Total/NA	Water	EPA 9056A	
180-125560-3 MSD	WAP-9D	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 367793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-125560-1	WAP-9S	Total/NA	Water	7470A	
180-125560-2	WAP-9I	Total/NA	Water	7470A	
180-125560-3	WAP-9D	Total/NA	Water	7470A	
MB 180-367793/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-367793/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 367811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-125560-1	WAP-9S	Total Recoverable	Water	3005A	
180-125560-2	WAP-9I	Total Recoverable	Water	3005A	
180-125560-3	WAP-9D	Total Recoverable	Water	3005A	
MB 180-367811/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-367811/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 368001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-125560-1	WAP-9S	Total/NA	Water	EPA 7470A	367793
180-125560-2	WAP-9I	Total/NA	Water	EPA 7470A	367793
180-125560-3	WAP-9D	Total/NA	Water	EPA 7470A	367793
MB 180-367793/1-A	Method Blank	Total/NA	Water	EPA 7470A	367793
LCS 180-367793/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	367793

Analysis Batch: 368509

Lab Sample ID 180-125560-1 180-125560-2	Client Sample ID WAP-9S WAP-9I	Prep Type Total Recoverable Total Recoverable	Matrix Water Water	Method EPA 6020A EPA 6020A	Prep Batch 367811 367811
180-125560-3	WAP-9D	Total Recoverable	Water	EPA 6020A	367811
MB 180-367811/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	367811
LCS 180-367811/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	367811

General Chemistry

Analysis Batch: 367709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-125560-1	WAP-9S	Total/NA	Water	SM 2540C	
180-125560-2	WAP-9I	Total/NA	Water	SM 2540C	
180-125560-3	WAP-9D	Total/NA	Water	SM 2540C	
MB 180-367709/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-367709/2	Lab Control Sample	Total/NA	Water	SM 2540C	

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QC Association Summary

Client: Haley & Aldrich, Inc. Job ID: 180-125560-1 Project/Site: West Ash Pond

General Chemistry

Analysis Batch: 367783

Lab Sample ID 180-125560-1	Client Sample ID WAP-9S	Prep Type Total/NA	Matrix Water	Method EPA 9040C	Prep Batch
180-125560-2	WAP-9I	Total/NA	Water	EPA 9040C	
180-125560-3	WAP-9D	Total/NA	Water	EPA 9040C	
LCS 180-367783/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-125560-1 DU	WAP-9S	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 522532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-125560-1	WAP-9S	Total/NA	Water	PrecSep-21	
180-125560-2	WAP-9I	Total/NA	Water	PrecSep-21	
180-125560-3	WAP-9D	Total/NA	Water	PrecSep-21	
MB 160-522532/10-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-522532/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-522532/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 522541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-125560-1	WAP-9S	Total/NA	Water	PrecSep_0	
180-125560-2	WAP-9I	Total/NA	Water	PrecSep_0	
180-125560-3	WAP-9D	Total/NA	Water	PrecSep_0	
MB 160-522541/10-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-522541/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-522541/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep 0	

TestAmerica Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Chain of Custody Record

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THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler:	Sampler: Lab Pl Borto				/i: t, Veronica			Carrier Tracking No(s):				COC No: 180-45121-7551.1			
lient Contact: //ark Miesfeldt	Phone:	Phone: 11 671 3730 E-Mail veror				ca.bortot@testamericainc.com							Page: Page 1 of 1			
ompany: Haley & Aldrich, Inc.		11 3 7			Τ						equest	ed	-		Job #:	
ddress:	Due Date Request	ed:			97,45	R			7	J	1	TT			Preservation Code	es:
65 Medford St Suite 2200	TAT Requested (da	ave).													A - HCL	M - Hexane
Soston		u, s ,.			1										B - NaOH C - Zn Acetate	N - None O - AsNaO2
ate, Zip: IA, 02129-0414							ı								D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3
none:	PO#:			5											F - MeOH G - Amchlor	R - Na2S2O3 S - H2SO4
mail:	Purchase Order WO#:	Requested			(OZ		ı	olids		-						T - TSP Dodecahydra U - Acetone
miesfeldt@haleyaldrich.com					No.			S De/						SIS		V - MCAA W - pH 4-5
oject Name: lest Ash Pond	Project #: 18016014				Sample (Yes or No		8	ssolv	82					containers		Z - other (specify)
te:	SSOW#:						GFM	ia D	Raz					con	Other:	
		r			d San		, S	Į.	9320					er of		
			Jampie ,	latrix	ltered n	6020A, 7470A	9040C, 9056A_ORGFM_28D	2540C_Calcd - Total Dissolved Solids	9315_Ra226, 9320_Ra228					Total Number of		
		Sample	, ,	=solid, waste/oil,	d Fi	₹ 8	0°,	S ₁	2 R					a N		
ample Identification	Sample Date		G=grab) BT=T	sue, A=Air		602	904	254	934					Tot	Special Ins	tructions/Note:
		><	Preservation	Code:	\times	D	N	N (\boxtimes		
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WAP-93 WAP-9I WAP-9D		1700		Vater			1							5		
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Non-Hazard Flammable Skin Iri	itant Paison B Unkno	,,, D _P	diological		ا		turn	To C	iont	may be	Discoso	l By Lab	es are ret	airie	ve For	Months
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Ver: 08/04/2016 9/13/2021

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180-125560 Waybill

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Client: Haley & Aldrich, Inc.

Job Number: 180-125560-1

Login Number: 125560 List Source: Eurofins TestAmerica, 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.	False	
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	



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-126888-1 Client Project/Site: West Ash Pond

For:

Haley & Aldrich, Inc. 465 Medford St Suite 2200 Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Kuntll Haye

Authorized for release by: 10/21/2021 7:14:39 PM

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@Eurofinset.com

LINKS

Review your project results through

Total Access

Have a Question?



Visit us at: www.eurofinsus.com/Env This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Client: Haley & Aldrich, Inc. Project/Site: West Ash Pond Laboratory Job ID: 180-126888-1

Table of Contents

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Case Narrative

Client: Haley & Aldrich, Inc.

Job ID: 180-126888-1

Project/Site: West Ash Pond

Job ID: 180-126888-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-126888-1

Comments

No additional comments.

Receipt

The samples were received on 9/10/2021 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.5° C.

GC Semi VOA

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

RAD

Methods 903.0, 9315: Radium 226 prep batch 160-527855

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-9D (180-126888-1), WAP-9I (180-126888-2), WAP-9S (180-126888-3), BLIND DUPLICATE (180-126888-4), (LCS 160-527855/1-A), (LCSD 160-527855/2-A) and (MB 160-527855/23-A)

Methods 904.0, 9320: Radium-228 Batch 527862

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-9D (180-126888-1), WAP-9I (180-126888-2), WAP-9S (180-126888-3), BLIND DUPLICATE (180-126888-4), (LCS 160-527862/1-A), (LCSD 160-527862/2-A) and (MB 160-527862/23-A)

Method PrecSep-21: Radium-226 Prep Batch 160-527855:

The following samples were prepared at a reduced aliquot due to Matrix: WAP-9I (180-126888-2). A laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-527855:

Insufficient sample volume was available to perform a sample duplicate for the following samples: WAP-9D (180-126888-1), WAP-9S (180-126888-3) and BLIND DUPLICATE (180-126888-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

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.

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-126888-1

Project/Site: West Ash Pond

Qualifiers

Metals

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

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

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Job ID: 180-126888-1

Laboratory: Eurofins TestAmerica, 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	06-27-21 *
California	State	2891	04-30-22
Connecticut	State	PH-0688	09-30-22
Florida	NELAP	E871008	06-30-22
Georgia	State	PA 02-00416	04-30-22
Illinois	NELAP	004375	06-30-22
Kansas	NELAP	E-10350	01-31-22
Kentucky (UST)	State	162013	04-30-22
Kentucky (WW)	State	KY98043	12-31-21
Louisiana	NELAP	04041	06-30-22
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-21
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	04-05-22
New Jersey	NELAP	PA005	06-30-22
New York	NELAP	11182	04-01-22
North Carolina (WW/SW)	State	434	12-31-21
North Dakota	State	R-227	04-30-22
Oregon	NELAP	PA-2151	02-06-22
Pennsylvania	NELAP	02-00416	04-30-22
Rhode Island	State	LAO00362	12-31-21
South Carolina	State	89014	04-30-22
Texas	NELAP	T104704528	03-31-22
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-22
Virginia	NELAP	10043	09-15-22
West Virginia DEP	State	142	01-31-22
Wisconsin	State	998027800	08-31-22

Laboratory: Eurofins TestAmerica, 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	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	06-30-21 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	004553	11-30-21
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-21
Kentucky (DW)	State	KY90125	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21

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

Eurofins TestAmerica, Pittsburgh

10/21/2021

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Job ID: 180-126888-1

Laboratory: Eurofins TestAmerica, 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	NELAP	04080	06-30-22	
Louisiana (DW)	State	LA011	12-31-21	
Maryland	State	310	09-30-22	
MI - RadChem Recognition	State	9005	06-30-22	
Missouri	State	780	06-30-22	
Nevada	State	MO000542020-1	07-31-22	
New Jersey	NELAP	MO002	06-30-22	
New York	NELAP	11616	04-01-22	
North Dakota	State	R-207	06-30-22	
NRC	NRC	24-24817-01	12-31-22	
Oklahoma	State	9997	08-31-22	
Oregon	NELAP	4157	09-01-22	
Pennsylvania	NELAP	68-00540	03-01-22	
South Carolina	State	85002001	06-30-22	
Texas	NELAP	T104704193	07-31-22	
US Fish & Wildlife	US Federal Programs	058448	07-31-22	
USDA	US Federal Programs	P330-17-00028	03-11-23	
Utah	NELAP	MO000542021-14	08-01-22	
Virginia	NELAP	10310	06-14-22	
Washington	State	C592	08-30-22	
West Virginia DEP	State	381	10-31-22	

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Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: West Ash Pond

Job ID: 180-126888-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-126888-1	WAP-9D	Water	09/09/21 14:10	09/10/21 10:00
180-126888-2	WAP-9I	Water	09/09/21 15:20	09/10/21 10:00
180-126888-3	WAP-9S	Water	09/09/21 17:30	09/10/21 10:00
180-126888-4	BLIND DUPLICATE	Water	09/09/21 00:01	09/10/21 10:00

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Method Summary

Client: Haley & Aldrich, Inc. Project/Site: West Ash Pond

Job ID: 180-126888-1

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
EPA 9040C	рН	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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.

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

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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

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Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Job ID: 180-126888-1

Client Sample ID: WAP-9D

Lab Sample ID: 180-126888-1

	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 nt ID: CHIC2100A		1			372382	09/23/21 07:07	J1T	TAL PIT
Total/NA	Analysis Instrumer	EPA 9056A at ID: CHIC2100A		1			372546	09/24/21 00:14	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	372134	09/20/21 13:26	AMD	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A nt ID: A		1			372523	09/22/21 08:51	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	372111	09/20/21 11:17	MM1	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGY		1			372463	09/22/21 11:49	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: NOEQUIP		1			372962	09/27/21 08:06	MTW	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	371390	09/14/21 14:31	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			1000.14 mL	1.0 g	527855	09/21/21 11:45	BMP	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			532781	10/19/21 14:27	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.14 mL	1.0 g	527862	09/21/21 12:55	BMP	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCRED		1			532799	10/18/21 14:02	ANW	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			533128	10/21/21 16:19	CAH	TAL SL

Client Sample ID: WAP-9I

Date Collected: 09/09/21 15:20

Lab Sample ID: 180-126888-2

Matrix: Water

Date Received: 09/10/21 10:00

	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			372382	09/23/21 06:18	J1T	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	372134	09/20/21 13:26	AMD	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A at ID: A		1			372523	09/22/21 08:55	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	372111	09/20/21 11:17	MM1	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A at ID: HGY		1			372463	09/22/21 11:52	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: NOEQUIP		1			372710	09/23/21 14:12	LWM	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	371390	09/14/21 14:31	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			750.39 mL	1.0 g	527855	09/21/21 11:45	BMP	TAL SL
Total/NA	Analysis Instrumer	9315 at ID: GFPCRED		1		-	532781	10/19/21 14:27	ANW	TAL SL

Eurofins TestAmerica, Pittsburgh

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10/21/2021

Client: Haley & Aldrich, Inc. Job ID: 180-126888-1 Project/Site: West Ash Pond

Client Sample ID: WAP-9I Lab Sample ID: 180-126888-2

Date Collected: 09/09/21 15:20 **Matrix: Water** Date Received: 09/10/21 10:00

	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			750.39 mL	1.0 g	527862	09/21/21 12:55	BMP	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCBLUE		1			532483	10/18/21 12:50	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			533128	10/21/21 16:19	CAH	TAL SL

Client Sample ID: WAP-9S Lab Sample ID: 180-126888-3

Date Collected: 09/09/21 17:30 **Matrix: Water**

Date Received: 09/10/21 10:00

	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			372382	09/23/21 05:46	J1T	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	372134	09/20/21 13:26	AMD	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A at ID: A		1			372523	09/22/21 08:59	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	372111	09/20/21 11:17	MM1	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A at ID: HGY		1			372463	09/22/21 11:53	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: NOEQUIP		1			372710	09/23/21 14:17	LWM	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	371390	09/14/21 14:31	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			1000.39 mL	1.0 g	527855	09/21/21 11:45	BMP	TAL SL
Total/NA	Analysis Instrumer	9315 at ID: GFPCBLUE		1		-	532779	10/19/21 14:30	MLK	TAL SL
Total/NA	Prep	PrecSep_0			1000.39 mL	1.0 g	527862	09/21/21 12:55	BMP	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCBLUE		1			532483	10/18/21 12:50	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			533128	10/21/21 16:19	CAH	TAL SL

Client Sample ID: BLIND DUPLICATE

Lab Sample ID: 180-126888-4 Date Collected: 09/09/21 00:01 **Matrix: Water**

Date Received: 09/10/21 10:00

	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			372382	09/23/21 06:02	J1T	TAL PIT
	Instrumer	nt ID: CHIC2100A								
Total Recoverable	Prep	3005A			50 mL	50 mL	372134	09/20/21 13:26	AMD	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			372523	09/22/21 09:02	RSK	TAL PIT
	Instrumer	nt ID: A								
Total/NA	Prep	7470A			25 mL	25 mL	372111	09/20/21 11:17	MM1	TAL PIT
Total/NA	Analysis	EPA 7470A		1			372463	09/22/21 11:54	RJR	TAL PIT
	Instrumer	nt ID: HGY								

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Client: Haley & Aldrich, Inc. Job ID: 180-126888-1 Project/Site: West Ash Pond

Client Sample ID: BLIND DUPLICATE

Date Received: 09/10/21 10:00

Lab Sample ID: 180-126888-4 Date Collected: 09/09/21 00:01

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	EPA 9040C		1			372710	09/23/21 14:23	LWM	TAL PIT
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	371390	09/14/21 14:31	KMM	TAL PIT
	Instrumer	nt ID: NOEQUIP								
Total/NA	Prep	PrecSep-21			999.45 mL	1.0 g	527855	09/21/21 11:45	BMP	TAL SL
Total/NA	Analysis	9315		1			532779	10/19/21 14:32	MLK	TAL SL
	Instrumer	t ID: GFPCBLUE								
Total/NA	Prep	PrecSep_0			999.45 mL	1.0 g	527862	09/21/21 12:55	BMP	TAL SL
Total/NA	Analysis	9320		1			532799	10/18/21 14:02	ANW	TAL SL
	Instrumer	t ID: GFPCRED								
Total/NA	Analysis	Ra226_Ra228		1			533128	10/21/21 16:19	CAH	TAL SL
	Instrumer	nt ID: NOEQUIP								

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058 TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL PIT

Batch Type: Prep

AMD = Alysha Donlan MM1 = Mary Beth Miller

Batch Type: Analysis

J1T = Jianwu Tang

JRB = James Burzio

KMM = Kendric Moore

LWM = Larry Matko

MTW = Michael Wesoloski

RJR = Ron Rosenbaum

RSK = Robert Kurtz

Lab: TAL SL

Batch Type: Prep

BMP = Bailey Pinette

Batch Type: Analysis

ANW = Aamber Woods

CAH = Chris Hough

FLC = Fernando Cruz

MLK = Micha Korrinhizer

Eurofins TestAmerica, Pittsburgh

Job ID: 180-126888-1

Client: Haley & Aldrich, Inc. Project/Site: West Ash Pond

Client Sample ID: WAP-9D Lab Sample ID: 180-126888-1

Date Collected: 09/09/21 14:10 **Matrix: Water**

Date Received: 09/10/21 10:00

Method: EPA 9056A	- Anions									
Analyte			Qualifier	RL		Unit	<u>D</u>	Prepared	Analyzed	Dil Fa
Chloride		20		1.0		mg/L			09/24/21 00:14	
Fluoride		0.14		0.10		3 mg/L			09/23/21 07:07	
Sulfate		39		1.0	0.76	6 mg/L			09/23/21 07:07	,
Method: EPA 6020A	- Metals	•								
Analyte			Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony		ND		0.0020	0.00038	U		09/20/21 13:26	09/22/21 08:51	•
Arsenic		0.0053		0.0010	0.0003	•		09/20/21 13:26	09/22/21 08:51	
Barium		0.18		0.010		3 mg/L		09/20/21 13:26	09/22/21 08:51	
Beryllium		ND		0.0010	0.00018	3 mg/L		09/20/21 13:26	09/22/21 08:51	
Boron		0.052	J	0.080	0.039	9 mg/L		09/20/21 13:26	09/22/21 08:51	
Cadmium		ND		0.0010	0.00022	2 mg/L		09/20/21 13:26	09/22/21 08:51	
Calcium		42		0.50	0.13	3 mg/L		09/20/21 13:26	09/22/21 08:51	•
Chromium		ND		0.0020	0.001	5 mg/L		09/20/21 13:26	09/22/21 08:51	
Cobalt		0.00030	J	0.00050	0.00013	3 mg/L		09/20/21 13:26	09/22/21 08:51	
_ead		0.00032	J	0.0010	0.00013	3 mg/L		09/20/21 13:26	09/22/21 08:51	
ithium		ND		0.0050	0.0034	1 mg/L		09/20/21 13:26	09/22/21 08:51	•
Molybdenum		0.0022	J	0.0050	0.0006	l mg/L		09/20/21 13:26	09/22/21 08:51	•
Selenium		ND		0.0050	0.001	5 mg/L		09/20/21 13:26	09/22/21 08:51	
hallium		ND		0.0010	0.0001	5 mg/L		09/20/21 13:26	09/22/21 08:51	•
Method: EPA 7470A	- Mercur	v (CVAA)								
Analyte		• • •	Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
Mercury		ND	-	0.00020	0.00013	mg/L		09/20/21 11:17	09/22/21 11:49	
General Chemistry										
Analyte			Qualifier	RL_		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids		210		10	10) mg/L			09/14/21 14:31	,
Analyte			Qualifier	RL_		Unit	D	Prepared	Analyzed	Dil Fac
Н		7.9	HF	0.1	0.	I SU			09/27/21 08:06	,
Method: 9315 - Radio	um-226 (GFPC)								
	·	•	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Ur	nit	Prepared	Analyzed	Dil Fac
Radium-226	0.526		0.223	0.228	1.00	0.254 pC	Ci/L	09/21/21 11:45	10/19/21 14:27	
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110						10/19/21 14:27	
Method: 9320 - Radi	um-228 (GFPC)	0	Tatal						
			Count	Total						
	- "		Uncert.	Uncert.						
Analyte		Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Ur		Prepared	Analyzed	Dil Fac
3 - I' 000	0.191	U	0.283	0.283	1.00	0.475 pC	i/L	09/21/21 12:55	10/18/21 14:02	•
Radium-228	• • • • • • • • • • • • • • • • • • • •									
Radium-228 Carrier		Qualifier	Limits					Prepared	Analyzed	Dil Fac
			Limits 40 - 110						Analyzed 10/18/21 14:02	Dil Fac

10/21/2021

Client: Haley & Aldrich, Inc. Job ID: 180-126888-1

Project/Site: West Ash Pond

Lab Sample ID: 180-126888-1 **Client Sample ID: WAP-9D**

Date Collected: 09/09/21 14:10 **Matrix: Water** Date Received: 09/10/21 10:00

Method: Ra226	S_Ra228 - Combined Radium-226 and Radium-228	
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			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.717		0.360	0.363	5.00	0.475	pCi/L	<u> </u>	10/21/21 16:19	1
226 + 228										

Client Sample ID: WAP-9I Lab Sample ID: 180-126888-2 **Matrix: Water**

Date Collected: 09/09/21 15:20 Date Received: 09/10/21 10:00

Method: EPA 9056A -	Anions, Ion Chromato	ography						
Analyte	Result Q	Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22	1.0	0.71	mg/L			09/23/21 06:18	1
Fluoride	0.17	0.10	0.026	mg/L			09/23/21 06:18	1
Sulfate	31	1.0	0.76	mg/L			09/23/21 06:18	1

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

Analyte	Result (Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	0.0020	0.00038	mg/L		09/20/21 13:26	09/22/21 08:55	1
Arsenic	0.0047	0.0010	0.00031	mg/L		09/20/21 13:26	09/22/21 08:55	1
Barium	0.091	0.010	0.0016	mg/L		09/20/21 13:26	09/22/21 08:55	1
Beryllium	ND	0.0010	0.00018	mg/L		09/20/21 13:26	09/22/21 08:55	1
Boron	0.10	0.080	0.039	mg/L		09/20/21 13:26	09/22/21 08:55	1
Cadmium	ND	0.0010	0.00022	mg/L		09/20/21 13:26	09/22/21 08:55	1
Calcium	46	0.50	0.13	mg/L		09/20/21 13:26	09/22/21 08:55	1
Chromium	ND	0.0020	0.0015	mg/L		09/20/21 13:26	09/22/21 08:55	1
Cobalt	0.00033 J	0.00050	0.00013	mg/L		09/20/21 13:26	09/22/21 08:55	1
Lead	0.00028 J	0.0010	0.00013	mg/L		09/20/21 13:26	09/22/21 08:55	1
Lithium	0.0043 J	0.0050	0.0034	mg/L		09/20/21 13:26	09/22/21 08:55	1
Molybdenum	0.020	0.0050	0.00061	mg/L		09/20/21 13:26	09/22/21 08:55	1
Selenium	ND	0.0050	0.0015	mg/L		09/20/21 13:26	09/22/21 08:55	1
Thallium	ND	0.0010	0.00015	mg/L		09/20/21 13:26	09/22/21 08:55	1

Method: EPA 7470A - Merci	Irv	(CVAA)
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Analyte	Result Qualifier	RL	MDL Un	nit D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013 mg	g/L	09/20/21 11:17	09/22/21 11:52	1

General Chemistry

Analyte	Result	Qualitier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	230		10	10	mg/L			09/14/21 14:31	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

Method: 9315 - Radium-226 (GFPC)

Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Radium-226	0.323		0.221	0.223	1.00	0.305	pCi/L	09/21/21 11:45	10/19/21 14:27	1
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			Count	iolai						

Ba Carrier 94.3 40 - 110 09/21/21 11:45 10/19/21 14:27

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Job ID: 180-126888-1

Client: Haley & Aldrich, Inc. Project/Site: West Ash Pond

Client Sample ID: WAP-9I

Lab Sample ID: 180-126888-2

Matrix: Water

Date Collected: 09/09/21 15:20 Date Received: 09/10/21 10:00

Method: 9320 - I	Radium-228	(GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.417	U	0.393	0.395	1.00	0.636	pCi/L	09/21/21 12:55	10/18/21 12:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.3		40 - 110					09/21/21 12:55	10/18/21 12:50	1
Y Carrier	79.6		40 - 110					09/21/21 12:55	10/18/21 12:50	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.				_		
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.740		0.451	0.454	5.00	0.636	pCi/L		10/21/21 16:19	1

Lab Sample ID: 180-126888-3 **Client Sample ID: WAP-9S** Date Collected: 09/09/21 17:30 **Matrix: Water** Date Received: 09/10/21 10:00

Method: EPA 9056A - Anions, Ion Chromatography										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	26		1.0	0.71	mg/L			09/23/21 05:46	1	
Fluoride	0.94		0.10	0.026	mg/L			09/23/21 05:46	1	
Sulfate	42		1.0	0.76	mg/L			09/23/21 05:46	1	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		09/20/21 13:26	09/22/21 08:59	1
Arsenic	0.00080	J	0.0010	0.00031	mg/L		09/20/21 13:26	09/22/21 08:59	1
Barium	0.087		0.010	0.0016	mg/L		09/20/21 13:26	09/22/21 08:59	1
Beryllium	ND		0.0010	0.00018	mg/L		09/20/21 13:26	09/22/21 08:59	1
Boron	1.2		0.080	0.039	mg/L		09/20/21 13:26	09/22/21 08:59	1
Cadmium	ND		0.0010	0.00022	mg/L		09/20/21 13:26	09/22/21 08:59	1
Calcium	74		0.50	0.13	mg/L		09/20/21 13:26	09/22/21 08:59	1
Chromium	ND		0.0020	0.0015	mg/L		09/20/21 13:26	09/22/21 08:59	1
Cobalt	0.00072		0.00050	0.00013	mg/L		09/20/21 13:26	09/22/21 08:59	1
Lead	0.00032	J	0.0010	0.00013	mg/L		09/20/21 13:26	09/22/21 08:59	1
Lithium	0.011		0.0050	0.0034	mg/L		09/20/21 13:26	09/22/21 08:59	1
Molybdenum	0.15		0.0050	0.00061	mg/L		09/20/21 13:26	09/22/21 08:59	1
Selenium	ND		0.0050	0.0015	mg/L		09/20/21 13:26	09/22/21 08:59	1
Thallium	ND		0.0010	0.00015	mg/L		09/20/21 13:26	09/22/21 08:59	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/20/21 11:17	09/22/21 11:53	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	340		10	10	mg/L			09/14/21 14:31	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.9	HE	0.1	0.1	SU			09/23/21 14:17	1

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Job ID: 180-126888-1

Client: Haley & Aldrich, Inc. Project/Site: West Ash Pond

Client Sample ID: WAP-9S

Lab Sample ID: 180-126888-3

Date Collected: 09/09/21 17:30 **Matrix: Water** Date Received: 09/10/21 10:00

Method: 9315 - Radium-226 (GFPC) Count Total Uncert. Uncert. **Analyte** Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 0.291 U 0.205 0.206 1.00 0.298 pCi/L 09/21/21 11:45 10/19/21 14:30 Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 93.7 40 - 110 09/21/21 11:45 10/19/21 14:30

Method: 9320 - Radium-228 (GFPC) Count Total Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RI MDC Unit Prepared Analyzed Dil Fac 0.192 U 0.283 0.284 09/21/21 12:55 10/18/21 12:50 Radium-228 1.00 0.475 pCi/L Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 93.7 40 - 110 09/21/21 12:55 10/18/21 12:50 77.4 40 - 110 09/21/21 12:55 10/18/21 12:50 Y Carrier

Method: Ra226 Ra228 - Combined Radium-226 and Radium-228 Total Count Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac **Combined Radium** 0.484 0.349 0.351 5.00 0.475 pCi/L 10/21/21 16:19 226 + 228

Client Sample ID: BLIND DUPLICATE Lab Sample ID: 180-126888-4

Date Collected: 09/09/21 00:01 **Matrix: Water** Date Received: 09/10/21 10:00

Method: EPA 9056A - Anions, Ion Chromatography Result Qualifier RL **MDL** Unit Analyte D Analyzed Dil Fac Prepared Chloride 1.0 0.71 mg/L 09/23/21 06:02 23 0.10 **Fluoride** 0.026 mg/L 09/23/21 06:02 0.87 **Sulfate** 40 1.0 0.76 mg/L 09/23/21 06:02

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable Result Qualifier RL MDL Unit D Prepared Analyzed Analyte Dil Fac Antimony ND 0.0020 0.00038 mg/L 09/20/21 13:26 09/22/21 09:02 0.00094 0.0010 0.00031 mg/L 09/20/21 13:26 09/22/21 09:02 **Arsenic** 0.0016 mg/L 09/20/21 13:26 09/22/21 09:02 0.010 **Barium** 0.087 0.00018 mg/L 09/22/21 09:02 Beryllium ND 0.0010 09/20/21 13:26 0.080 0.039 mg/L 09/20/21 13:26 09/22/21 09:02 **Boron** 1.3 0.0010 0.00022 mg/L 09/22/21 09:02 Cadmium ND 09/20/21 13:26 0.50 0.13 mg/L 09/20/21 13:26 09/22/21 09:02 Calcium 75 Chromium ND 0.0020 0.0015 mg/L 09/20/21 13:26 09/22/21 09:02 0.00050 09/20/21 13:26 09/22/21 09:02 Cobalt 0.00013 mg/L 0.00086 0.00039 0.0010 0.00013 mg/L 09/20/21 13:26 09/22/21 09:02 Lead 0.0050 0.0034 mg/L 09/20/21 13:26 09/22/21 09:02 Lithium 0.012 Molybdenum 0.0050 0.00061 mg/L 09/20/21 13:26 09/22/21 09:02 0.15 Selenium ND 0.0050 0.0015 mg/L 09/20/21 13:26 09/22/21 09:02 Thallium ND 0.0010 0.00015 mg/L 09/20/21 13:26 09/22/21 09:02

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10/21/2021

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Job ID: 180-126888-1

Client: Haley & Aldrich, Inc. Project/Site: West Ash Pond

Client Sample ID: BLIND DUPLICATE

Date Collected: 09/09/21 00:01 Date Received: 09/10/21 10:00 Lab Sample ID: 180-126888-4

Matrix: Water

Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013 mg/L	09/20/21 11:17	09/22/21 11:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	340		10	10	mg/L			09/14/21 14:31	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0	HF	0.1	0.1	SU			09/23/21 14:23	1

Method: 9315 - Radium-226 (GFPC)

Method: 5515 - Rad	10111 - 220 (3.1.0)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.232	U	0.173	0.174	1.00	0.248	pCi/L	09/21/21 11:45	10/19/21 14:32	1
Carrier Ba Carrier	%Yield 89.6	Qualifier	Limits 40 - 110					Prepared 09/21/21 11:45	Analyzed 10/19/21 14:32	Dil Fac

Method: 9320 - Radium-228 (GFPC)

226 + 228

Method. 3320 - Ita	adiuiii-220 (Gi i C)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.517		0.299	0.302	1.00	0.443	pCi/L	09/21/21 12:55	10/18/21 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.6		40 - 110					09/21/21 12:55	10/18/21 14:02	1
Y Carrier	83.0		40 - 110					09/21/21 12:55	10/18/21 14:02	1

Method: 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	0.749		0.345	0.349	5.00	0.443 pCi/L		10/21/21 16:19	1

Eurofins TestAmerica, Pittsburgh

Client: Haley & Aldrich, Inc. Job ID: 180-126888-1

Project/Site: West Ash Pond

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-372382/42

Matrix: Water

Analyte

Chloride

Fluoride

Sulfate

Analysis Batch: 372382

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

MB MB Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac D ND 1.0 0.71 mg/L 09/23/21 00:51 ND 0.10 0.026 mg/L 09/23/21 00:51 ND 1.0 0.76 mg/L 09/23/21 00:51

Lab Sample ID: LCS 180-372382/41

Matrix: Water

Analysis Batch: 372382

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

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Chloride 47.9 50.0 mg/L 96 80 - 120 Fluoride 2.50 2.55 mg/L 102 80 - 120 Sulfate 50.0 48.4 mg/L 97 80 - 120

Lab Sample ID: MB 180-372546/30

Matrix: Water

Analysis Batch: 372546

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

Client Sample ID: Lab Control Sample

MB MB Result Qualifier Dil Fac Analyte RL **MDL** Unit D **Prepared** Analyzed Chloride ND 1.0 0.71 mg/L 09/23/21 22:03 Fluoride ND 0.10 0.026 mg/L 09/23/21 22:03 0.76 mg/L 09/23/21 22:03 Sulfate ND 1.0

Lab Sample ID: LCS 180-372546/29

Matrix: Water

Analysis Batch: 372546

/ maryone Date in or 2010	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Chloride	50.0	48.2		mg/L		96	80 - 120
Fluoride	2.50	2.58		mg/L		103	80 - 120
Sulfate	50.0	47.9		mg/L		96	80 - 120

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

Lab Sample ID: MB 180-372134/1-A

Matrix: Water

Analysis Batch: 372523

Client Sample ID: Method Blank **Prep Type: Total Recoverable** Prep Batch: 372134

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		09/20/21 13:26	09/22/21 07:42	1
Arsenic	ND		0.0010	0.00031	mg/L		09/20/21 13:26	09/22/21 07:42	1
Barium	ND		0.010	0.0016	mg/L		09/20/21 13:26	09/22/21 07:42	1
Beryllium	ND		0.0010	0.00018	mg/L		09/20/21 13:26	09/22/21 07:42	1
Boron	ND		0.080	0.039	mg/L		09/20/21 13:26	09/22/21 07:42	1
Cadmium	ND		0.0010	0.00022	mg/L		09/20/21 13:26	09/22/21 07:42	1
Calcium	ND		0.50	0.13	mg/L		09/20/21 13:26	09/22/21 07:42	1
Chromium	ND		0.0020	0.0015	mg/L		09/20/21 13:26	09/22/21 07:42	1
Cobalt	ND		0.00050	0.00013	mg/L		09/20/21 13:26	09/22/21 07:42	1
Lead	ND		0.0010	0.00013	mg/L		09/20/21 13:26	09/22/21 07:42	1
Lithium	ND		0.0050	0.0034	mg/L		09/20/21 13:26	09/22/21 07:42	1
Molybdenum	ND		0.0050	0.00061	mg/L		09/20/21 13:26	09/22/21 07:42	1

Eurofins TestAmerica, Pittsburgh

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Prep Type: Total/NA

Client: Haley & Aldrich, Inc. Job ID: 180-126888-1

Project/Site: West Ash Pond

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

MB MB

мв мв

Lab Sample ID: MB 180-372134/1-A

Matrix: Water

Analysis Batch: 372523

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

Prep Batch: 372134

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		0.0050	0.0015	mg/L		09/20/21 13:26	09/22/21 07:42	1
Thallium	ND		0.0010	0.00015	mg/L		09/20/21 13:26	09/22/21 07:42	1

Lab Sample ID: LCS 180-372134/2-A

Matrix: Water

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

10

Analysis Batch: 372523							Prep Batch: 372134
	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	0.250	0.242		mg/L		97	80 - 120
Arsenic	1.00	1.05		mg/L		105	80 - 120
Barium	1.00	1.01		mg/L		101	80 - 120
Beryllium	0.500	0.521		mg/L		104	80 - 120
Boron	1.25	1.23		mg/L		99	80 - 120
Cadmium	0.500	0.511		mg/L		102	80 - 120
Calcium	25.0	28.8		mg/L		115	80 - 120
Chromium	0.500	0.521		mg/L		104	80 - 120
Cobalt	0.500	0.500		mg/L		100	80 - 120
Lead	0.500	0.513		mg/L		103	80 - 120
Lithium	0.500	0.493		mg/L		99	80 - 120
Molybdenum	0.500	0.512		mg/L		102	80 - 120
Selenium	1.00	1.00		mg/L		100	80 - 120
Thallium	1.00	1.03		mg/L		103	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-372111/1-A

Matrix: Water

Analysis Batch: 372463

Client Sample ID: Method Blank

Prep Type: Total/NA **Prep Batch: 372111**

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Mercury ND 0.00020 0.00013 mg/L 09/20/21 11:17 09/22/21 11:46

Lab Sample ID: LCS 180-372111/2-A

Matrix: Water

Analysis Batch: 372463

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

Prep Batch: 372111

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits 0.00250 80 - 120 Mercury 0.00250 mg/L 100

Lab Sample ID: 180-126888-1 MS

Matrix: Water

Analysis Batch: 372463

Client Sample ID: WAP-9D

Prep Type: Total/NA **Prep Batch: 372111**

Spike MS MS %Rec. Sample Sample Analyte Result Qualifier Added Result Qualifier Limits Unit D %Rec ND 0.00100 97 75 - 125 Mercury 0.000968 mg/L

Eurofins TestAmerica, Pittsburgh

10/21/2021

Job ID: 180-126888-1

Project/Site: West Ash Pond

Client: Haley & Aldrich, Inc.

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

Lab Sample ID: 180-126888-1 MSD Client Sample ID: WAP-9D

Matrix: Water

Prep Type: Total/NA **Analysis Batch: 372463 Prep Batch: 372111**

%Rec. **RPD**

Sample Sample Spike MSD MSD Result Qualifier Result Qualifier Added %Rec Limits RPD Limit Analyte Unit Mercury ND 0.00100 0.000973 mg/L 97 75 - 125 20

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-372710/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 372710

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

Lab Sample ID: LCS 180-372962/1 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 372962

LCS LCS %Rec. Spike Added Result Qualifier Limits **Analyte** Unit D %Rec

рН 7.00 7.0 SU 100 99 - 101

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

Lab Sample ID: MB 180-371390/2 Client Sample ID: Method Blank **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 371390

MB MB Result Qualifier RL **MDL** Unit Analyte Dil Fac Prepared Analyzed 10 Total Dissolved Solids 09/14/21 14:31 ND 10 mg/L

Lab Sample ID: LCS 180-371390/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 371390

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits **Total Dissolved Solids** 685 678 mg/L 99 80 - 120

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-527855/23-A **Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA Prep Batch: 527855**

Analysis Batch: 532779

Count Total MR MR Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 0.148 0.148 09/21/21 11:45 10/19/21 14:32 0.03405 Ū 1.00 0.278 pCi/L

MB MB Carrier **%Yield Qualifier** Limits Prepared Analyzed Dil Fac Ba Carrier 98.2 40 - 110 09/21/21 11:45 10/19/21 14:32

Eurofins TestAmerica, Pittsburgh

Job ID: 180-126888-1

Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-527855/1-A

Matrix: Water

Analysis Batch: 532486

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 527855

Total Spike LCS LCS Uncert. %Rec. Analyte Added Result Qual $(2\sigma + / -)$ RL**MDC** Unit %Rec Limits Radium-226 11.3 11.06 1.35 1.00 0.317 pCi/L 75 - 125

LCS LCS

Carrier %Yield Qualifier Limits Ba Carrier 107 40 - 110

Lab Sample ID: LCSD 160-527855/2-A

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

10

Matrix: Water Analysis Batch: 532486 **Prep Batch: 527855**

Total

LCSD LCSD %Rec. **RER Spike** Uncert. Analyte Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits Limit RER 0.19 Radium-226 11.3 10.56 1.34 1.00 0.370 pCi/L 93 75 - 125

LCSD LCSD

Carrier %Yield Qualifier Limits Ba Carrier 94.3 40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-527862/23-A Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 532483 Prep Batch: 527862 Total Count MB MB Uncert. Uncert.

Analyte Result Qualifier **MDC** Unit $(2\sigma + / -)$ $(2\sigma + / -)$ RL Prepared Analyzed Dil Fac Radium-228 0.4521 Ū 0.395 0.397 1.00 0.634 pCi/L 09/21/21 12:55 10/18/21 14:48

> MB MB

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 98.2 40 - 110 09/21/21 12:55 10/18/21 14:48 40 - 110 09/21/21 12:55 10/18/21 14:48 Y Carrier 71.8

Lab Sample ID: LCS 160-527862/1-A

Matrix: Water

Analysis Batch: 532488

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

Prep Batch: 527862

Total

Spike LCS LCS Uncert. %Rec. Analyte Added Result Qual $(2\sigma + / -)$ RL MDC Unit %Rec Limits Radium-228 1.05 1.00 0.329 pCi/L 75 - 125 9.23 8.997 97

LCS LCS

Carrier %Yield Qualifier Limits 40 - 110 Ba Carrier 107 Y Carrier 81.5 40 - 110

10/21/2021

QC Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-126888-1

Project/Site: West Ash Pond

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

Lab Sample ID: LCSD 160-527862/2-A **Client Sample ID: Lab Control Sample Dup**

Matrix: Water

Analysis Batch: 532488

Prep Type: Total/NA

Prep Batch: 527862

				iotai							
	Spike	LCSD	LCSD	Uncert.					%Rec.		RER
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC	Unit	%Rec	Limits	RER	Limit
Radium-228	9.23	10.26		1.20	1.00	0.410	pCi/L	111	75 - 125	0.56	1

LCSD LCSD Carrier %Yield Qualifier Limits Ba Carrier 94.3 40 - 110 Y Carrier 80.4 40 - 110

QC Association Summary

Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Job ID: 180-126888-1

HPLC/IC

Analysis Batch: 372382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-126888-1	WAP-9D	Total/NA	Water	EPA 9056A	
180-126888-2	WAP-9I	Total/NA	Water	EPA 9056A	
180-126888-3	WAP-9S	Total/NA	Water	EPA 9056A	
180-126888-4	BLIND DUPLICATE	Total/NA	Water	EPA 9056A	
MB 180-372382/42	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-372382/41	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 372546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-126888-1	WAP-9D	Total/NA	Water	EPA 9056A	
MB 180-372546/30	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-372546/29	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 372111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-126888-1	WAP-9D	Total/NA	Water	7470A	
180-126888-2	WAP-9I	Total/NA	Water	7470A	
180-126888-3	WAP-9S	Total/NA	Water	7470A	
180-126888-4	BLIND DUPLICATE	Total/NA	Water	7470A	
MB 180-372111/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-372111/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-126888-1 MS	WAP-9D	Total/NA	Water	7470A	
180-126888-1 MSD	WAP-9D	Total/NA	Water	7470A	

Prep Batch: 372134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-126888-1	WAP-9D	Total Recoverable	Water	3005A	
180-126888-2	WAP-9I	Total Recoverable	Water	3005A	
180-126888-3	WAP-9S	Total Recoverable	Water	3005A	
180-126888-4	BLIND DUPLICATE	Total Recoverable	Water	3005A	
MB 180-372134/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-372134/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 372463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-126888-1	WAP-9D	Total/NA	Water	EPA 7470A	372111
180-126888-2	WAP-9I	Total/NA	Water	EPA 7470A	372111
180-126888-3	WAP-9S	Total/NA	Water	EPA 7470A	372111
180-126888-4	BLIND DUPLICATE	Total/NA	Water	EPA 7470A	372111
MB 180-372111/1-A	Method Blank	Total/NA	Water	EPA 7470A	372111
LCS 180-372111/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	372111
180-126888-1 MS	WAP-9D	Total/NA	Water	EPA 7470A	372111
180-126888-1 MSD	WAP-9D	Total/NA	Water	EPA 7470A	372111

Analysis Batch: 372523

Lab Sample ID 180-126888-1	Client Sample ID WAP-9D	Prep Type Total Recoverable	Matrix Water	Method EPA 6020A	Prep Batch 372134
180-126888-2	WAP-9I	Total Recoverable	Water	EPA 6020A	372134
180-126888-3	WAP-9S	Total Recoverable	Water	EPA 6020A	372134

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QC Association Summary

Client: Haley & Aldrich, Inc.

Project/Site: West Ash Pond

Job ID: 180-126888-1

Metals (Continued)

Analysis Batch: 372523 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-126888-4	BLIND DUPLICATE	Total Recoverable	Water	EPA 6020A	372134
MB 180-372134/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	372134
LCS 180-372134/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	372134

General Chemistry

Analysis Batch: 371390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-126888-1	WAP-9D	Total/NA	Water	SM 2540C	_
180-126888-2	WAP-9I	Total/NA	Water	SM 2540C	
180-126888-3	WAP-9S	Total/NA	Water	SM 2540C	
180-126888-4	BLIND DUPLICATE	Total/NA	Water	SM 2540C	
MB 180-371390/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-371390/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 372710

Lab Sample ID 180-126888-2	Client Sample ID WAP-9I	Prep Type Total/NA	Matrix Water	Method EPA 9040C	Prep Batch
180-126888-3	WAP-9S	Total/NA	Water	EPA 9040C	
180-126888-4	BLIND DUPLICATE	Total/NA	Water	EPA 9040C	
LCS 180-372710/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 372962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-126888-1	WAP-9D	Total/NA	Water	EPA 9040C	
LCS 180-372962/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 527855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-126888-1	WAP-9D	Total/NA	Water	PrecSep-21	
180-126888-2	WAP-9I	Total/NA	Water	PrecSep-21	
180-126888-3	WAP-9S	Total/NA	Water	PrecSep-21	
180-126888-4	BLIND DUPLICATE	Total/NA	Water	PrecSep-21	
MB 160-527855/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-527855/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-527855/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 527862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-126888-1	WAP-9D	Total/NA	Water	PrecSep_0	
180-126888-2	WAP-9I	Total/NA	Water	PrecSep_0	
180-126888-3	WAP-9S	Total/NA	Water	PrecSep_0	
180-126888-4	BLIND DUPLICATE	Total/NA	Water	PrecSep_0	
MB 160-527862/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-527862/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-527862/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Eurofins TestAmerica, Pittsburgh

10/21/2021

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TestAmerica Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

Ver: 08/04/20/21/2021

Client Information	Sampler:	, Was	sett		ot, Ve	onica			-		Ca	rrier Tra	icking N	lo(s):			COC No: 180-45121-755	1.1
Client Contact: Mark Miesfeldt	Phone: (317)	671-	3737	E-Ma		ortot@1	testa	merica	ainc.cc	m							Page: Page 1 of 1	
ompany: Haley & Aldrich, Inc.									Analy	sis R	Reque	ested					Job #:	
ddress: l65 Medford St Suite 2200	Due Date Request	ted:		100					T			T					Preservation Co	
City:	TAT Requested (d	ays):															A - HCL B - NaOH	M - Hexane N - None
Boston tate, Zip:	_																C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S
MA, 02129-0414	DO #											+					E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3
hone:	PO#: Purchase Order	r Requested	1	4.	(ON			spil									G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydra
mail: nmiesfeldt@haleyaldrich.com	WO #:				১ ত			Total Dissolved Solids						,		2	I - Ice J - DI Water	U - Acetone V - MCAA
roject Name: Vest Ash Pond	Project #:	Project #: 18016014					8	ssolve 28								taine	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)
ite:	SSOW#:						ORGFM_28D	tal Disso								of containers	Other:	
			1	88-4 1	ered Sample (Yes MS/MSD (Yes or N	4		. 6								10		
			Sample Type	Matrix (w=water,	ı≓∣∈	7470A	9040C, 9056A	Calcd -								Round		
		Sample	(C=comp,	S=solid, O=waste/oil,	Field F	6020A,	960	2540C_ 9315 R								Mail	Constable	
ample Identification	Sample Date	Time		et=tissue, A=Air)	XX	D										X	Special i	nstructions/Note:
WAP- 9D	9-9-21	1410	6	Water		X	1	X	V)									
WAD - 9 I	. , , ,	1520	ı	Water														
WAP-95		1730	1	Water														
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Possible Hazard Identification			ll.		Sá	mple L	Dispo	osal (A fee	may b	e asse	essed	if sar	nples	are re	etain	ed longer than	1 month)
	oison B Unkno	own \square_F	Radiological			Rei						osal B	y Lab			Arch	ive For	Months
eliverable Requested: I, II, III, IV, Other (specify)					Sp	ecial Ir	struc	ctions/	/QC Re	equire	ments:				(4)			
mpty Kit Relinquished by:		Date:			Time							Meth	od of S	·				
elinquished by ATLAS	Date/Time: 9-9-21	/ 19	9 0	ATT A	5	Receiv	ed by	Col	le.	0			I	Date/Ti	ne:			Company
delinquished by:	Date/Time:	/		Company		Receiv	ed by:	-					Ī	ate/Ti	ne: 0/2	ı	1000	Company FT
elinquished by:	Date/Time:			Company		Receiv		1						Oate/Ti			1000	Company
Custody Seals Intact: Custody Seal No.:							_	<u>ر</u>	e(s) °C a									

Job Number: 180-126888-1

Login Number: 126888

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Jodis, Matthew V

Creator. Jours, Matthew V		
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	

Job Number: 180-126888-1

Login Number: 126888

List Number: 2

Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

List Creation: 09/13/21 01:54 PM

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	



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-127878-1

Client Project/Site: CCR Groundwater Monitoring

For:

Haley & Aldrich, Inc. 465 Medford St **Suite 2200** Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Kuntll Haye

Authorized for release by: 10/15/2021 3:19:37 PM

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@Eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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

Laboratory Job ID: 180-127878-1

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-127878-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-127878-1

Comments

No additional comments.

Receipt

The samples were received on 9/30/2021 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.3° C, 2.6° C, 2.6° C and 3.4° C.

Receipt Exceptions

The following samples were listed on the Chain of Custody (COC); however, no samples were received: WAP-4D (180-127878-4), WAP-6S (180-127878-5), WAP-6I (180-127878-6) and WAP-6D (180-127878-7). The samples were received later on the same day.

GC Semi VOA

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

Metals

Method 6020A: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 180-374970 and analytical batch 180-375344 was outside control limits for thallium. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample(LCS) was within acceptance limits.

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

General Chemistry

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

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Job ID: 180-127878-1

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-127878-1

Project/Site: CCR Groundwater Monitoring

Qualifiers

Metals

Qualifier Qualifier Description

F2 MS/MSD RPD 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.

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

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc. Job ID: 180-127878-1

Project/Site: CCR Groundwater Monitoring

Laboratory: Eurofins TestAmerica, 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	06-27-21 *		
California	State	2891	04-30-22		
Connecticut	State	PH-0688	09-30-22		
Florida	NELAP	E871008	06-30-22		
Georgia	State	PA 02-00416	04-30-22		
Illinois	NELAP	004375	06-30-22		
Kansas	NELAP	E-10350	01-31-22		
Kentucky (UST)	State	162013	04-30-22		
Kentucky (WW)	State	KY98043	12-31-21		
Louisiana	NELAP	04041	06-30-22		
Maine	State	PA00164	03-06-22		
Minnesota	NELAP	042-999-482	12-31-21		
Nevada	State	PA00164	08-31-22		
New Hampshire	NELAP	2030	04-05-22		
New Jersey	NELAP	PA005	06-30-22		
New York	NELAP	11182	04-01-22		
North Carolina (WW/SW)	State	434	12-31-21		
North Dakota	State	R-227	04-30-22		
Oregon	NELAP	PA-2151	02-06-22		
Pennsylvania	NELAP	02-00416	04-30-22		
Rhode Island	State	LAO00362	12-31-21		
South Carolina	State	89014	04-30-22		
Texas	NELAP	T104704528	03-31-22		
USDA	Federal	P-Soil-01	06-26-22		
USDA	US Federal Programs	P330-16-00211	06-26-22		
Utah	NELAP	PA001462019-8	05-31-22		
Virginia	NELAP	10043	09-15-22		
West Virginia DEP	State	142	01-31-22		
Wisconsin	State	998027800	08-31-22		

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

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-127878-1	WAP-5I	Water	09/28/21 09:50	09/30/21 10:30
180-127878-2	WAP-5D	Water	09/28/21 10:47	09/30/21 10:30
180-127878-3	WAP-4I	Water	09/28/21 11:40	09/30/21 10:30
180-127878-4	WAP-4D	Water	09/28/21 12:42	09/30/21 15:40
180-127878-5	WAP-6S	Water	09/29/21 10:00	09/30/21 15:40
180-127878-6	WAP-6I	Water	09/29/21 10:57	09/30/21 15:40
180-127878-7	WAP-6D	Water	09/29/21 11:35	09/30/21 15:40
180-127878-8	WAP-8S	Water	09/29/21 12:30	09/30/21 10:30
180-127878-9	WAP-8I	Water	09/29/21 13:20	09/30/21 10:30
180-127878-10	WAP-8D	Water	09/29/21 14:10	09/30/21 10:30
180-127878-11	DUP-1	Water	09/28/21 00:00	09/30/21 15:40
180-127878-12	FIELD BLANK	Water	09/28/21 11:30	09/30/21 15:40

Job ID: 180-127878-1

Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

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

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:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Job ID: 180-127878-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-5I Lab Sample ID: 180-127878-1

Matrix: Water

Job ID: 180-127878-1

Date Collected: 09/28/21 09:50 Date Received: 09/30/21 10:30

	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: CHIC2100A		1			373753	10/02/21 13:07	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374970	10/12/21 15:54	MM1	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			375344	10/14/21 12:03	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	374161	10/06/21 06:18	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			374321	10/06/21 16:26	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			373892	10/01/21 16:42	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	374112	10/05/21 14:55	KMM	TAL PIT

Lab Sample ID: 180-127878-2 **Client Sample ID: WAP-5D**

Date Collected: 09/28/21 10:47 **Matrix: Water**

Date Received: 09/30/21 10:30

Dran Time	Batch	Batch	Dun	Dil	Initial	Final	Batch	Prepared	Amalyat	Lab
Prep Type Total/NA	Analysis Instrumen	EPA 9056A tt ID: CHIC2100A	Run	Factor 1	Amount	Amount	Number 373753	or Analyzed 10/02/21 12:50	Analyst JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A It ID: A		1	50 mL	50 mL	374970 375344	10/12/21 15:54 10/14/21 12:06		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A tt ID: HGY		1	25 mL	25 mL	374161 374321	10/06/21 06:18 10/06/21 16:27		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			373892	10/01/21 16:47	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	374112	10/05/21 14:55	KMM	TAL PIT

Client Sample ID: WAP-41 Lab Sample ID: 180-127878-3 Date Collected: 09/28/21 11:40 **Matrix: Water**

Date Received: 09/30/21 10:30

	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: CHICS2100B		1			373596	10/01/21 11:32	J1T	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374970	10/12/21 15:54	MM1	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			375344	10/14/21 12:10	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	374161	10/06/21 06:18	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A it ID: HGY		1			374321	10/06/21 16:28	RJR	TAL PIT

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-4I Lab Sample ID: 180-127878-3

Date Collected: 09/28/21 11:40 Date Received: 09/30/21 10:30 **Matrix: Water**

Job ID: 180-127878-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9040C		1			373866	10/04/21 08:23	MJH	TAL PIT
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	374112	10/05/21 14:55	KMM	TAL PIT
	Instrument	ID: NOEQUIP								

Lab Sample ID: 180-127878-4 **Client Sample ID: WAP-4D**

Date Collected: 09/28/21 12:42 **Matrix: Water**

Date Received: 09/30/21 15:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 9056A t ID: CHIC2100A		1			373753	10/02/21 11:29	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374970	10/12/21 15:54	MM1	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020A t ID: A		1			375344	10/14/21 12:35	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	374161	10/06/21 06:18	RJR	TAL PIT
Total/NA	Analysis Instrument	EPA 7470A t ID: HGY		1			374321	10/06/21 16:34	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			373892	10/01/21 17:04	MJH	TAL PIT
Total/NA	Analysis Instrument	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	374112	10/05/21 14:55	KMM	TAL PIT

Client Sample ID: WAP-6S Lab Sample ID: 180-127878-5

Date Collected: 09/29/21 10:00 Date Received: 09/30/21 15:40

	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			373596	10/01/21 12:22	J1T	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374970	10/12/21 15:54	MM1	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			375344	10/14/21 12:39	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	374161	10/06/21 06:18	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			374321	10/06/21 16:35	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			373892	10/01/21 17:10	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	374232	10/06/21 11:24	KMM	TAL PIT

Matrix: Water

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-6I Lab Sample ID: 180-127878-6

Matrix: Water

Job ID: 180-127878-1

Date Collected: 09/29/21 10:57 Date Received: 09/30/21 15:40

	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: CHICS2100B		1			373596	10/01/21 12:55	J1T	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374970	10/12/21 15:54	MM1	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A at ID: A		1			375344	10/14/21 12:50	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	374161	10/06/21 06:18	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A at ID: HGY		1			374321	10/06/21 16:36	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: PHTITRATOR		1			373892	10/01/21 17:15	MJH	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	374232	10/06/21 11:24	KMM	TAL PIT

Client Sample ID: WAP-6D Lab Sample ID: 180-127878-7 Date Collected: 09/29/21 11:35

Matrix: Water

Date Received: 09/30/21 15:40

	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			373596	10/01/21 13:11	J1T	TAL PIT
	Instrument	ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	374970	10/12/21 15:54	MM1	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			375344	10/14/21 12:53	RSK	TAL PIT
	Instrument	ID: A								
Total/NA	Prep	7470A			25 mL	25 mL	374161	10/06/21 06:18	RJR	TAL PIT
Total/NA	Analysis	EPA 7470A		1			374321	10/06/21 16:37	RJR	TAL PIT
	Instrument	ID: HGY								
Total/NA	Analysis	EPA 9040C		1			373892	10/01/21 17:21	MJH	TAL PIT
	Instrument	ID: PHTITRATOR								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	374232	10/06/21 11:24	KMM	TAL PIT
	Instrument	ID: NOEQUIP								

Lab Sample ID: 180-127878-8 **Client Sample ID: WAP-8S** Date Collected: 09/29/21 12:30 **Matrix: Water**

Date Received: 09/30/21 10:30

	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			373753	10/02/21 13:23	JRB	TAL PIT
	Instrumen	t ID: CHIC2100A								
Total/NA	Analysis	EPA 9056A		5			373753	10/02/21 13:39	JRB	TAL PIT
	Instrumen	t ID: CHIC2100A								
Total Recoverable	Prep	3005A			50 mL	50 mL	374970	10/12/21 15:54	MM1	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			375344	10/14/21 12:57	RSK	TAL PIT
	Instrumen	t ID: A								

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-8S Lab Sample ID: 180-127878-8

Date Collected: 09/29/21 12:30

Matrix: Water Date Received: 09/30/21 10:30

	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	374161	10/06/21 06:18	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A at ID: HGY		1			374321	10/06/21 16:38	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: PHTITRATOR		1			373892	10/01/21 17:47	MJH	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	374232	10/06/21 11:24	KMM	TAL PIT

Lab Sample ID: 180-127878-9 **Client Sample ID: WAP-8I**

Date Collected: 09/29/21 13:20 **Matrix: Water**

Date Received: 09/30/21 10:30

	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			373596	10/01/21 13:27	J1T	TAL PIT
	Instrument	ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	374970	10/12/21 15:54	MM1	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			375344	10/14/21 13:08	RSK	TAL PIT
	Instrument	tID: A								
Total/NA	Prep	7470A			25 mL	25 mL	374161	10/06/21 06:18	RJR	TAL PIT
Total/NA	Analysis	EPA 7470A		1			374321	10/06/21 16:39	RJR	TAL PIT
	Instrument	ID: HGY								
Total/NA	Analysis	EPA 9040C		1			373892	10/01/21 17:53	MJH	TAL PIT
	Instrument	ID: PHTITRATOR								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	374232	10/06/21 11:24	KMM	TAL PIT
	Instrument	ID: NOEQUIP								

Client Sample ID: WAP-8D Lab Sample ID: 180-127878-10 **Matrix: Water**

Date Collected: 09/29/21 14:10

Date Received: 09/30/21 10:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			373753	10/02/21 12:18	JRB	TAL PIT
	Instrumen	t ID: CHIC2100A								
Total Recoverable	Prep	3005A			50 mL	50 mL	374970	10/12/21 15:54	MM1	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			375344	10/14/21 13:19	RSK	TAL PIT
	Instrumen	t ID: A								
Total/NA	Prep	7470A			25 mL	25 mL	374161	10/06/21 06:18	RJR	TAL PIT
Total/NA	Analysis	EPA 7470A		1			374321	10/06/21 16:40	RJR	TAL PIT
	Instrumen	t ID: HGY								
Total/NA	Analysis	EPA 9040C		1			373892	10/01/21 17:58	MJH	TAL PIT
	Instrumen	t ID: PHTITRATOR								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	374232	10/06/21 11:24	KMM	TAL PIT
	Instrumen	t ID: NOEQUIP								

Eurofins TestAmerica, Pittsburgh

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Job ID: 180-127878-1

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: DUP-1 Lab Sample ID: 180-127878-11

Date Collected: 09/28/21 00:00 Matrix: Water Date Received: 09/30/21 15:40

	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: CHIC2100A		1			373753	10/02/21 12:34	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374970	10/12/21 15:54	MM1	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			375344	10/14/21 11:59	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	374161	10/06/21 06:18	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			374321	10/06/21 16:41	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			373892	10/01/21 18:04	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C		1	100 mL	100 mL	374112	10/05/21 14:55	KMM	TAL PIT

Client Sample ID: FIELD BLANK Lab Sample ID: 180-127878-12

Date Collected: 09/28/21 11:30 Matrix: Water Date Received: 09/30/21 15:40

Batch Batch Dil Initial Final **Batch** Prepared **Prep Type** Type Method Run Factor Amount Amount Number or Analyzed Analyst Lab 373753 JRB Total/NA Analysis **EPA 9056A** 10/02/21 11:12 TAL PIT Instrument ID: CHIC2100A Total Recoverable Prep 50 mL 3005A 50 mL 375103 10/13/21 11:32 MM1 TAL PIT Total Recoverable Analysis **EPA 6020A** 1 375344 10/14/21 17:05 RSK TAL PIT Instrument ID: A Total/NA 7470A 25 mL 10/06/21 06:18 RJR TAL PIT Prep 25 mL 374161 Total/NA EPA 7470A TAL PIT Analysis 1 374321 10/06/21 16:42 RJR Instrument ID: HGY Total/NA Analysis **EPA 9040C** 373892 10/01/21 18:09 MJH TAL PIT Instrument ID: PHTITRATOR Total/NA Analysis SM 2540C 100 mL 100 mL 374112 10/05/21 14:55 KMM TAL PIT Instrument ID: NOEQUIP

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

MM1 = Mary Beth Miller

RJR = Ron Rosenbaum

Batch Type: Analysis

J1T = Jianwu Tang

JRB = James Burzio

KMM = Kendric Moore

MJH = Michael Houde

RJR = Ron Rosenbaum

RSK = Robert Kurtz

Eurofins TestAmerica, Pittsburgh

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Job ID: 180-127878-1

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Client Sample Results

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-5I Lab Sample ID: 180-127878-1

Date Collected: 09/28/21 09:50 Date Received: 09/30/21 10:30

Matrix: Water

Job ID: 180-127878-1

Method: EPA 9056A - Anions,									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		1.0	0.71	mg/L			10/02/21 13:07	1
Fluoride	0.16		0.10	0.026	mg/L			10/02/21 13:07	1
Sulfate	43		1.0	0.76	mg/L			10/02/21 13:07	1
_									

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 12:03	-
Arsenic	0.012		0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 12:03	
Barium	0.12		0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 12:03	•
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:54	10/14/21 12:03	•
Boron	0.060	J	0.080	0.039	mg/L		10/12/21 15:54	10/14/21 12:03	
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:54	10/14/21 12:03	•
Calcium	39		0.50	0.13	mg/L		10/12/21 15:54	10/14/21 12:03	
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:54	10/14/21 12:03	
Cobalt	0.00042	J	0.00050	0.00013	mg/L		10/12/21 15:54	10/14/21 12:03	
Lead	0.00020	J	0.0010	0.00013	mg/L		10/12/21 15:54	10/14/21 12:03	
Lithium	0.0039	J	0.0050	0.0034	mg/L		10/12/21 15:54	10/14/21 12:03	•
Molybdenum	0.0016	J	0.0050	0.00061	mg/L		10/12/21 15:54	10/14/21 12:03	•
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:54	10/14/21 12:03	
Thallium	ND		0.0010	0.00015	ma/L		10/12/21 15:54	10/14/21 12:03	

Method: EPA 7470A - Mercu	ıry (CVAA)							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013	mg/L		10/06/21 06:18	10/06/21 16:26	1
General Chemistry								

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	220		10	10	mg/L			10/05/21 14:55	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.8	HF	0.1	0.1	SU			10/01/21 16:42	1

Client Sample ID: WAP-5D Lab Sample ID: 180-127878-2 Date Collected: 09/28/21 10:47 **Matrix: Water**

Date Received: 09/30/21 10:30

Method: EPA 9056A - Anions, Ion Chromatography										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	19		1.0	0.71	mg/L			10/02/21 12:50	1	
Fluoride	0.15		0.10	0.026	mg/L			10/02/21 12:50	1	
Sulfate	41		1.0	0.76	mg/L			10/02/21 12:50	1	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 12:06	1
Arsenic	0.0099		0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 12:06	1
Barium	0.20		0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 12:06	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:54	10/14/21 12:06	1
Boron	0.041	J	0.080	0.039	mg/L		10/12/21 15:54	10/14/21 12:06	1
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:54	10/14/21 12:06	1
Calcium	46		0.50	0.13	mg/L		10/12/21 15:54	10/14/21 12:06	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:54	10/14/21 12:06	1

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Job ID: 180-127878-1

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

Client Sample ID: WAP-5D Lab Sample ID: 180-127878-2

Date Collected: 09/28/21 10:47 **Matrix: Water** Date Received: 09/30/21 10:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		0.00050	0.00013	mg/L		10/12/21 15:54	10/14/21 12:06	1
Lead	ND		0.0010	0.00013	mg/L		10/12/21 15:54	10/14/21 12:06	1
Lithium	ND		0.0050	0.0034	mg/L		10/12/21 15:54	10/14/21 12:06	1
Molybdenum	0.0038	J	0.0050	0.00061	mg/L		10/12/21 15:54	10/14/21 12:06	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:54	10/14/21 12:06	1
Thallium	ND		0.0010	0.00015	mg/L		10/12/21 15:54	10/14/21 12:06	1
Method: EPA 7470A - Merc	cury (CVAA)				J				
Method: EPA 7470A - Merc	eury (CVAA)				Ü				
Analyte	Result	Qualifier	RL		Unit	<u>D</u>	Prepared 10/10/10/10	Analyzed	Dil Fac
Method: EPA 7470A - Merc Analyte Mercury	• •	Qualifier	RL	MDL 0.00013		<u>D</u>	Prepared 10/06/21 06:18	Analyzed 10/06/21 16:27	Dil Fac
Mercury	Result	Qualifier				<u>D</u>			Dil Fac
Analyte Mercury	Result ND	Qualifier		0.00013		<u>D</u>			Dil Fac
Analyte Mercury General Chemistry	Result ND	<u> </u>	0.00020	0.00013	mg/L		10/06/21 06:18	10/06/21 16:27	1
Analyte Mercury General Chemistry Analyte	Result ND Result 230	<u> </u>	0.00020	0.00013 MDL 10	mg/L Unit mg/L		10/06/21 06:18	10/06/21 16:27 Analyzed	1

Client Sample ID: WAP-4I Lab Sample ID: 180-127878-3 **Matrix: Water**

Date Collected: 09/28/21 11:40 Date Received: 09/30/21 10:30

Total Dissolved Solids

Method: EPA 9056A - Anions, Ion Chromatography										
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	21	1.0	0.71	mg/L			10/01/21 11:32	1		
Fluoride	0.15	0.10	0.026	mg/L			10/01/21 11:32	1		
Sulfate	37	1.0	0.76	mg/L			10/01/21 11:32	1		

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 12:10	1
Arsenic	0.0045		0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 12:10	1
Barium	0.17		0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 12:10	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:54	10/14/21 12:10	1
Boron	0.070	J	0.080	0.039	mg/L		10/12/21 15:54	10/14/21 12:10	1
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:54	10/14/21 12:10	1
Calcium	38		0.50	0.13	mg/L		10/12/21 15:54	10/14/21 12:10	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:54	10/14/21 12:10	1
Cobalt	0.00047	J	0.00050	0.00013	mg/L		10/12/21 15:54	10/14/21 12:10	1
Lead	ND		0.0010	0.00013	mg/L		10/12/21 15:54	10/14/21 12:10	1
Lithium	0.0042	J	0.0050	0.0034	mg/L		10/12/21 15:54	10/14/21 12:10	1
Molybdenum	0.0020	J	0.0050	0.00061	mg/L		10/12/21 15:54	10/14/21 12:10	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:54	10/14/21 12:10	1
Thallium	ND	F2	0.0010	0.00015	mg/L		10/12/21 15:54	10/14/21 12:10	1

Method: EPA 7470A - Merc	ury (CVAA)							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND	0.00020	0.00013	mg/L		10/06/21 06:18	10/06/21 16:28	1
General Chemistry								
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

10

230

10/05/21 14:55

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10 mg/L

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-41

Lab Sample ID: 180-127878-3 Date Collected: 09/28/21 11:40

Matrix: Water

Date Received: 09/30/21 10:30

Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
рН	7.8 HF	0.1	0.1 SU			10/04/21 08:23	1

Lab Sample ID: 180-127878-4 **Client Sample ID: WAP-4D**

Date Collected: 09/28/21 12:42 **Matrix: Water**

Date Received: 09/30/21 15:40

Method: EPA 9056A - Anions, Ion Chromatography										
Analyte	Result Qu	ıalifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	20	1.0	0.71	mg/L			10/02/21 11:29	1		
Fluoride	0.14	0.10	0.026	mg/L			10/02/21 11:29	1		
Sulfate	28	1.0	0.76	mg/L			10/02/21 11:29	1		

Sulfate	28	1.0	0.76	mg/L			10/02/21 11:29	1
Method: EPA 6020A - Meta	ls (ICP/MS) - Total Rec	overable						
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 12:35	1
Arsenic	0.0093	0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 12:35	1
Barium	0.28	0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 12:35	1
Dorullium	ND	0.0010	0.00010	ma/l		10/12/21 15:51	10/11/01 10:25	

Barium	0.28	0.010	0.0016 m	ng/L	10/12/21 15:54	10/14/21 12:35	
Beryllium	ND	0.0010	0.00018 m	ng/L	10/12/21 15:54	10/14/21 12:35	
Boron	0.11	0.080	0.039 m	ng/L	10/12/21 15:54	10/14/21 12:35	
Cadmium	ND	0.0010	0.00022 m	ng/L	10/12/21 15:54	10/14/21 12:35	
Calcium	46	0.50	0.13 m	ng/L	10/12/21 15:54	10/14/21 12:35	
Chromium	ND	0.0020	0.0015 m	ng/L	10/12/21 15:54	10/14/21 12:35	
Cobalt	0.00023 J	0.00050	0.00013 m	ng/L	10/12/21 15:54	10/14/21 12:35	
Lead	0.00015 J	0.0010	0.00013 m	ng/L	10/12/21 15:54	10/14/21 12:35	
Lithium	ND	0.0050	0.0034 m	ng/L	10/12/21 15:54	10/14/21 12:35	
Molybdenum	0.0052	0.0050	0.00061 m	ng/L	10/12/21 15:54	10/14/21 12:35	
Selenium	ND	0.0050	0.0015 m	ng/L	10/12/21 15:54	10/14/21 12:35	,

Method: EPA 7470A - Mercury	(CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/06/21 06:18	10/06/21 16:34	1

0.0010

0.00024 J

0.00015 mg/L

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	230		10	10	mg/L			10/05/21 14:55	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.9	HF	0.1	0.1	SU			10/01/21 17:04	1

Client Sample ID: WAP-6S Lab Sample ID: 180-127878-5 Date Collected: 09/29/21 10:00 **Matrix: Water**

Date Received: 09/30/21 15:40

Thallium

Method: EPA 9056A - A	nions, Ion Chromatograpi	hy						
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31	1.0	0.71	mg/L			10/01/21 12:22	1
Fluoride	0.47	0.10	0.026	mg/L			10/01/21 12:22	1
Sulfate	96	1.0	0.76	mg/L			10/01/21 12:22	1

Method: EPA 6020A - Metals (I	CP/MS) - To	tal Recov	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 12:39	1

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10/12/21 15:54 10/14/21 12:35

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-127878-5 **Client Sample ID: WAP-6S**

Date Collected: 09/29/21 10:00 Date Received: 09/30/21 15:40

Matrix: Water

Job ID: 180-127878-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00057	J	0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 12:39	1
Barium	0.042		0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 12:39	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:54	10/14/21 12:39	1
Boron	2.3		0.080	0.039	mg/L		10/12/21 15:54	10/14/21 12:39	1
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:54	10/14/21 12:39	1
Calcium	85		0.50	0.13	mg/L		10/12/21 15:54	10/14/21 12:39	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:54	10/14/21 12:39	1
Cobalt	0.00079		0.00050	0.00013	mg/L		10/12/21 15:54	10/14/21 12:39	1
Lead	0.00016	J	0.0010	0.00013	mg/L		10/12/21 15:54	10/14/21 12:39	1
Lithium	ND		0.0050	0.0034	mg/L		10/12/21 15:54	10/14/21 12:39	1
Molybdenum	0.16		0.0050	0.00061	mg/L		10/12/21 15:54	10/14/21 12:39	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:54	10/14/21 12:39	1
Thallium	ND		0.0010	0.00015	mg/L		10/12/21 15:54	10/14/21 12:39	1
Method: EPA 7470A - I	Mercury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/06/21 06:18	10/06/21 16:35	1

Analyte Result Qualifier RL **RL** Unit D Prepared Analyzed Dil Fac рН 7.7 HF 0.1 0.1 SU 10/01/21 17:10 **Client Sample ID: WAP-61** Lab Sample ID: 180-127878-6

RL

10

MDL Unit

10 mg/L

D

Prepared

Result Qualifier

460

Date Collected: 09/29/21 10:57 Date Received: 09/30/21 15:40

General Chemistry

Total Dissolved Solids

Analyte

Method: EPA 9056A	- Anions, Ion Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		1.0	0.71	mg/L			10/01/21 12:55	1
Fluoride	0.15		0.10	0.026	mg/L			10/01/21 12:55	1
Sulfate	38		1.0	0.76	mg/L			10/01/21 12:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 12:50	1
Arsenic	0.0033		0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 12:50	1
Barium	0.13		0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 12:50	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:54	10/14/21 12:50	1
Boron	0.083		0.080	0.039	mg/L		10/12/21 15:54	10/14/21 12:50	1
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:54	10/14/21 12:50	1
Calcium	41		0.50	0.13	mg/L		10/12/21 15:54	10/14/21 12:50	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:54	10/14/21 12:50	1
Cobalt	0.00023	J	0.00050	0.00013	mg/L		10/12/21 15:54	10/14/21 12:50	1
Lead	ND		0.0010	0.00013	mg/L		10/12/21 15:54	10/14/21 12:50	1
Lithium	0.0036	J	0.0050	0.0034	mg/L		10/12/21 15:54	10/14/21 12:50	1
Molybdenum	0.0054		0.0050	0.00061	mg/L		10/12/21 15:54	10/14/21 12:50	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:54	10/14/21 12:50	1
Thallium	ND		0.0010	0.00015	mg/L		10/12/21 15:54	10/14/21 12:50	1

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Dil Fac

Matrix: Water

Analyzed

10/06/21 11:24

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

Client Sample ID: WAP-61

Date Collected: 09/29/21 10:57 Date Received: 09/30/21 15:40 Lab Sample ID: 180-127878-6

Matrix: Water

Analyte	Result Qualifier	RL	MDL Uni	t D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013 mg/	/L	10/06/21 06:18	10/06/21 16:36	1

General Chemistry

Contra Chomica y									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	220		10	10	mg/L			10/06/21 11:24	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.9	HF	0.1	0.1	SU			10/01/21 17:15	1

Lab Sample ID: 180-127878-7 **Client Sample ID: WAP-6D**

Date Collected: 09/29/21 11:35 Date Received: 09/30/21 15:40

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

	,								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21		1.0	0.71	mg/L			10/01/21 13:11	1
Fluoride	0.14		0.10	0.026	mg/L			10/01/21 13:11	1
Sulfate	38		1.0	0.76	mg/L			10/01/21 13:11	1

Method: EPA 6020A - Metals	(ICP/MS) - Total Recoverable
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 12:53	1
Arsenic	0.0054		0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 12:53	1
Barium	0.19		0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 12:53	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:54	10/14/21 12:53	1
Boron	0.065	J	0.080	0.039	mg/L		10/12/21 15:54	10/14/21 12:53	1
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:54	10/14/21 12:53	1
Calcium	39		0.50	0.13	mg/L		10/12/21 15:54	10/14/21 12:53	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:54	10/14/21 12:53	1
Cobalt	0.00013	J	0.00050	0.00013	mg/L		10/12/21 15:54	10/14/21 12:53	1
Lead	ND		0.0010	0.00013	mg/L		10/12/21 15:54	10/14/21 12:53	1
Lithium	ND		0.0050	0.0034	mg/L		10/12/21 15:54	10/14/21 12:53	1
Molybdenum	0.0019	J	0.0050	0.00061	mg/L		10/12/21 15:54	10/14/21 12:53	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:54	10/14/21 12:53	1
Thallium	ND		0.0010	0.00015	mg/L		10/12/21 15:54	10/14/21 12:53	1

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND -	0.00020	0.00013 mg/l		10/06/21 06:18	10/06/21 16:37	

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	230		10	10	mg/L			10/06/21 11:24	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

Client Sample Results

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-8S Lab Sample ID: 180-127878-8

Date Collected: 09/29/21 12:30 Matrix: Water

Date Received: 09/30/21 10:30

Method: EPA 9056A - Anions, Ion Chromatography									
Analyte	Result Q	ualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	74		1.0	0.71	mg/L			10/02/21 13:23	1
Fluoride	0.11		0.10	0.026	mg/L			10/02/21 13:23	1
Sulfate	270		5.0	3.8	mg/L			10/02/21 13:39	5

Analyte	Result Qu	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 12:57	
Arsenic	0.017	0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 12:57	
Barium	0.25	0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 12:57	•
Beryllium	ND	0.0010	0.00018	mg/L		10/12/21 15:54	10/14/21 12:57	
Boron	2.7	0.080	0.039	mg/L		10/12/21 15:54	10/14/21 12:57	
Cadmium	ND	0.0010	0.00022	mg/L		10/12/21 15:54	10/14/21 12:57	•
Calcium	140	0.50	0.13	mg/L		10/12/21 15:54	10/14/21 12:57	
Chromium	ND	0.0020	0.0015	mg/L		10/12/21 15:54	10/14/21 12:57	
Cobalt	0.00066	0.00050	0.00013	mg/L		10/12/21 15:54	10/14/21 12:57	
Lead	ND	0.0010	0.00013	mg/L		10/12/21 15:54	10/14/21 12:57	
Lithium	0.039	0.0050	0.0034	mg/L		10/12/21 15:54	10/14/21 12:57	
Molybdenum	0.27	0.0050	0.00061	mg/L		10/12/21 15:54	10/14/21 12:57	
Selenium	ND	0.0050	0.0015	mg/L		10/12/21 15:54	10/14/21 12:57	
Thallium	ND	0.0010	0.00015	mg/L		10/12/21 15:54	10/14/21 12:57	

Method: EPA 7470A - Mercul Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND	0.00020	0.00013	mg/L		10/06/21 06:18	10/06/21 16:38	1
General Chemistry								

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	900		10	10	mg/L			10/06/21 11:24	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0	HF	0.1	0.1	SU			10/01/21 17:47	1

Client Sample ID: WAP-8I

Date Collected: 09/29/21 13:20

Lab Sample ID: 180-127878-9

Matrix: Water

Date Received: 09/30/21 10:30

Method: EPA 9056A	- Anions, Ion Chromatography							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22	1.0	0.71	mg/L			10/01/21 13:27	1
Fluoride	0.22	0.10	0.026	mg/L			10/01/21 13:27	1
Sulfate	47	1.0	0.76	mg/L			10/01/21 13:27	1

Analyte	Result C	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND		0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 13:08	1
Arsenic	0.0034		0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 13:08	1
Barium	0.050		0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 13:08	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:54	10/14/21 13:08	1
Boron	0.083		0.080	0.039	mg/L		10/12/21 15:54	10/14/21 13:08	1
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:54	10/14/21 13:08	1
Calcium	44		0.50	0.13	mg/L		10/12/21 15:54	10/14/21 13:08	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:54	10/14/21 13:08	1

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Job ID: 180-127878-1

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8

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12

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Job ID: 180-127878-1

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

Lab Sample ID: 180-127878-9 **Client Sample ID: WAP-8I**

Date Collected: 09/29/21 13:20 **Matrix: Water**

Date Received: 09/30/21 10:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.00047	J	0.00050	0.00013	mg/L		10/12/21 15:54	10/14/21 13:08	1
Lead	ND		0.0010	0.00013	mg/L		10/12/21 15:54	10/14/21 13:08	1
Lithium	ND		0.0050	0.0034	mg/L		10/12/21 15:54	10/14/21 13:08	1
Molybdenum	0.033		0.0050	0.00061	mg/L		10/12/21 15:54	10/14/21 13:08	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:54	10/14/21 13:08	1
Thallium	ND		0.0010	0.00015	mg/L		10/12/21 15:54	10/14/21 13:08	1

Method: EPA 7470A - Mercury (CVAA)							
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND	0.00020	0.00013 mg/L		10/06/21 06:18	10/06/21 16:39	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	240		10	10	mg/L			10/06/21 11:24	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.9	HF	0.1	0.1	SU			10/01/21 17:53	1

Lab Sample ID: 180-127878-10 **Client Sample ID: WAP-8D** Date Collected: 09/29/21 14:10 **Matrix: Water**

Date Received: 09/30/21 10:30

Total Dissolved Solids

Method: EPA 9056A - Ar	nions, Ion Chromatography							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20	1.0	0.71	mg/L			10/02/21 12:18	1
Fluoride	0.18	0.10	0.026	mg/L			10/02/21 12:18	1
Sulfate	43	1.0	0.76	mg/L			10/02/21 12:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 13:19	1
Arsenic	0.0024		0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 13:19	1
Barium	0.061		0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 13:19	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:54	10/14/21 13:19	1
Boron	0.058	J	0.080	0.039	mg/L		10/12/21 15:54	10/14/21 13:19	1
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:54	10/14/21 13:19	1
Calcium	39		0.50	0.13	mg/L		10/12/21 15:54	10/14/21 13:19	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:54	10/14/21 13:19	1
Cobalt	ND		0.00050	0.00013	mg/L		10/12/21 15:54	10/14/21 13:19	1
Lead	ND		0.0010	0.00013	mg/L		10/12/21 15:54	10/14/21 13:19	1
Lithium	ND		0.0050	0.0034	mg/L		10/12/21 15:54	10/14/21 13:19	1
Molybdenum	0.0013	J	0.0050	0.00061	mg/L		10/12/21 15:54	10/14/21 13:19	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:54	10/14/21 13:19	1
Thallium	ND		0.0010	0.00015	mg/L		10/12/21 15:54	10/14/21 13:19	1

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Method: EPA 7470A - Mercury (CV Analyte Mercury	•	Qualifier	RL 0.00020	MDL 0.00013		<u>D</u>	Prepared 10/06/21 06:18	Analyzed 10/06/21 16:40	Dil Fac
Thallium	ND		0.0010	0.00015	mg/L		10/12/21 15:54	10/14/21 13:19	1

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10/06/21 11:24

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10 mg/L

Project/Site: CCR Groundwater Monitoring

Lab Sample ID: 180-127878-10 Client Sample ID: WAP-8D

Date Collected: 09/29/21 14:10 **Matrix: Water**

Date Received: 09/30/21 10:30

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.9	HF	0.1	0.1	SU			10/01/21 17:58	1

Client Sample ID: DUP-1 Lab Sample ID: 180-127878-11

Date Collected: 09/28/21 00:00

Date Received: 09/30/21 15:40

Method: EPA 9056A - Anions, I	on Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		1.0	0.71	mg/L			10/02/21 12:34	1
Fluoride	0.14		0.10	0.026	mg/L			10/02/21 12:34	1
Sulfate	26		1.0	0.76	mg/L			10/02/21 12:34	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Antimony ND 0.0020 0.00038 mg/L 10/12/21 15:54 10/14/21 11:59 **Arsenic** 0.0092 0.0010 0.00031 mg/L 10/12/21 15:54 10/14/21 11:59 0.0016 mg/L 10/12/21 15:54 10/14/21 11:59 **Barium** 0.28 0.010 0.0010 0.00018 mg/L 10/12/21 15:54 10/14/21 11:59 Beryllium ND 0.080 0.039 mg/L 10/12/21 15:54 10/14/21 11:59 **Boron** 0.039 J Cadmium ND 0.0010 0.00022 mg/L 10/12/21 15:54 10/14/21 11:59 **Calcium** 48 0.50 0.13 mg/L 10/12/21 15:54 10/14/21 11:59 Chromium ND 0.0020 0.0015 mg/L 10/12/21 15:54 10/14/21 11:59 Cobalt ND 0.00050 0.00013 mg/L 10/12/21 15:54 10/14/21 11:59 Lead ND 0.0010 0.00013 mg/L 10/12/21 15:54 10/14/21 11:59 Lithium ND 0.0034 mg/L 10/12/21 15:54 10/14/21 11:59 0.0050 Molybdenum 0.0051 0.0050 0.00061 mg/L 10/12/21 15:54 10/14/21 11:59 Selenium ND 0.0050 0.0015 mg/L 10/12/21 15:54 10/14/21 11:59 Thallium ND 0.0010 0.00015 mg/L 10/12/21 15:54 10/14/21 11:59

Method: EPA 7470A - Mercury	(CVAA)							
Analyte	Result Qu	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013	mg/L		10/06/21 06:18	10/06/21 16:41	1

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	240		10	10	mg/L			10/05/21 14:55	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ha	8.0	HE	0.1	0.1	SU			10/01/21 18:04	1

Client Sample ID: FIELD BLANK Lab Sample ID: 180-127878-12 Date Collected: 09/28/21 11:30 **Matrix: Water**

Date Received: 09/30/21 15:40

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND ND	1.0	0.71	mg/L			10/02/21 11:12	1
Fluoride	ND	0.10	0.026	mg/L			10/02/21 11:12	1
Sulfate	ND	1.0	0.76	mg/L			10/02/21 11:12	1

Method: EPA 6020A - Metals (ICP/MS) - Total Reco	overable						
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.0020	0.00038	mg/L		10/13/21 11:32	10/14/21 17:05	1

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Matrix: Water

Client Sample Results

Client: Haley & Aldrich, Inc.

Total Dissolved Solids

Analyte

pН

Project/Site: CCR Groundwater Monitoring

Client Sample ID: FIELD BLANK

Date Collected: 09/28/21 11:30 Date Received: 09/30/21 15:40

Lab Sample ID: 180-127878-12

Matrix: Water

Job ID: 180-127878-1

10/05/21 14:55

Analyzed

10/01/21 18:09

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00031	mg/L		10/13/21 11:32	10/14/21 17:05	1
Barium	ND		0.010	0.0016	mg/L		10/13/21 11:32	10/14/21 17:05	1
Beryllium	ND		0.0010	0.00018	mg/L		10/13/21 11:32	10/14/21 17:05	1
Boron	0.057	J	0.080	0.039	mg/L		10/13/21 11:32	10/14/21 17:05	1
Cadmium	ND		0.0010	0.00022	mg/L		10/13/21 11:32	10/14/21 17:05	1
Calcium	ND		0.50	0.13	mg/L		10/13/21 11:32	10/14/21 17:05	1
Chromium	ND		0.0020	0.0015	mg/L		10/13/21 11:32	10/14/21 17:05	1
Cobalt	ND		0.00050	0.00013	mg/L		10/13/21 11:32	10/14/21 17:05	1
Lead	ND		0.0010	0.00013	mg/L		10/13/21 11:32	10/14/21 17:05	1
Lithium	ND		0.0050	0.0034	mg/L		10/13/21 11:32	10/14/21 17:05	1
Molybdenum	ND		0.0050	0.00061	mg/L		10/13/21 11:32	10/14/21 17:05	1
Selenium	ND		0.0050	0.0015	mg/L		10/13/21 11:32	10/14/21 17:05	1
Thallium	0.00020	J	0.0010	0.00015	mg/L		10/13/21 11:32	10/14/21 17:05	1
- Method: EPA 7470A - Merc	curv (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/06/21 06:18	10/06/21 16:42	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

10

RL

0.1

10 mg/L

RL Unit

0.1 SU

D

Prepared

ND

Result Qualifier

6.0 HF

Dil Fac

Project/Site: CCR Groundwater Monitoring

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-373596/7

Matrix: Water

Analysis Batch: 373596

Client Sample ID: Method Blank

Prep Type: Total/NA

Job ID: 180-127878-1

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac D Chloride ND 1.0 0.71 mg/L 10/01/21 11:16 Fluoride ND 0.10 0.026 mg/L 10/01/21 11:16 Sulfate ND 1.0 0.76 mg/L 10/01/21 11:16

Lab Sample ID: LCS 180-373596/6

Matrix: Water

Analysis Batch: 373596

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 50.9 mg/L 102 80 - 120 Fluoride 2.50 2.41 mg/L 97 80 - 120 Sulfate 50.0 mg/L 97 80 - 120 48.3

Lab Sample ID: 180-127878-3 MS

Matrix: Water

Analysis Batch: 373596

Client Sample ID: WAP-4I Prep Type: Total/NA

Client Sample ID: WAP-4I

Prep Type: Total/NA

•	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	21		50.0	63.9		mg/L		86	80 - 120	
Fluoride	0.15		2.50	2.34		mg/L		88	80 - 120	
Sulfate	37		50.0	78.7		mg/L		83	80 - 120	

Lab Sample ID: 180-127878-3 MSD

Matrix: Water

Analysis Batch: 373596

7 many one Batom of Cool												
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	21		50.0	65.7		mg/L		89	80 - 120	3	15	
Fluoride	0.15		2.50	2.47		mg/L		93	80 - 120	6	15	
Sulfate	37		50.0	80.2		mg/L		86	80 - 120	2	15	

Lab Sample ID: MB 180-373753/7

Matrix: Water

Analysis Batch: 373753

Client Sample ID: Method Blank

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			10/02/21 09:20	1
Fluoride	ND		0.10	0.026	mg/L			10/02/21 09:20	1
Sulfate	ND		1.0	0.76	mg/L			10/02/21 09:20	1

Lab Sample ID: LCS 180-373753/6

Matrix: Water

Analysis Batch: 373753

Allalysis Datcii. 373733	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	52.8		mg/L		106	80 - 120	 _
Fluoride	2.50	2.84		mg/L		114	80 - 120	
Sulfate	50.0	53.6		mg/L		107	80 - 120	

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Prep Type: Total/NA

10/15/2021

Prep Type: Total/NA

Project/Site: CCR Groundwater Monitoring

Job ID: 180-127878-1

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

Lab Sample ID: MB 180-374970/1-A

Matrix: Water

Analysis Batch: 375344

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 374970

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:54	10/14/21 11:12	1
Arsenic	ND		0.0010	0.00031	mg/L		10/12/21 15:54	10/14/21 11:12	1
Barium	ND		0.010	0.0016	mg/L		10/12/21 15:54	10/14/21 11:12	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:54	10/14/21 11:12	1
Boron	ND		0.080	0.039	mg/L		10/12/21 15:54	10/14/21 11:12	1
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:54	10/14/21 11:12	1
Calcium	ND		0.50	0.13	mg/L		10/12/21 15:54	10/14/21 11:12	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:54	10/14/21 11:12	1
Cobalt	ND		0.00050	0.00013	mg/L		10/12/21 15:54	10/14/21 11:12	1
Lead	ND		0.0010	0.00013	mg/L		10/12/21 15:54	10/14/21 11:12	1
Lithium	ND		0.0050	0.0034	mg/L		10/12/21 15:54	10/14/21 11:12	1
Molybdenum	ND		0.0050	0.00061	mg/L		10/12/21 15:54	10/14/21 11:12	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:54	10/14/21 11:12	1
Thallium	ND		0.0010	0.00015	mg/L		10/12/21 15:54	10/14/21 11:12	1

Lab Sample ID: LCS 180-374970/2-A

Matrix: Water

Analysis Batch: 375344

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 374970

Spike LCS LCS %Rec. **Analyte** Added Result Qualifier Unit D %Rec Limits Antimony 0.250 0.239 mg/L 96 80 - 120 Arsenic 1.00 0.986 80 - 120 mg/L 99 Barium 1.00 0.965 mg/L 97 80 - 120 Beryllium 0.500 0.487 mg/L 97 80 - 120 97 Boron 1.25 1.21 mg/L 80 - 120 Cadmium 0.500 0.487 97 80 - 120 mg/L Calcium 25.0 25.8 mg/L 103 80 - 120 Chromium 0.500 0.487 mg/L 97 80 - 120 Cobalt 0.486 0.500 mg/L 97 80 - 120 Lead 0.500 0.492 mg/L 98 80 - 120 0.467 Lithium 0.500 93 80 - 120 mg/L Molybdenum 0.500 0.494 mg/L 99 80 - 120

0.960

1.03

mg/L

mg/L

1.00

1.00

Lab Sample ID: 180-127878-3 MS

Matrix: Water

Selenium

Thallium

Analysis Batch: 375344

Client Sample ID: WAP-41 **Prep Type: Total Recoverable** Prep Batch: 374970

80 - 120

80 - 120

96

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	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	ND		0.250	0.235		mg/L		94	75 - 125	
Arsenic	0.0045		1.00	0.842		mg/L		84	75 - 125	
Barium	0.17		1.00	0.996		mg/L		83	75 - 125	
Beryllium	ND		0.500	0.417		mg/L		83	75 - 125	
Boron	0.070	J	1.25	1.24		mg/L		93	75 - 125	
Cadmium	ND		0.500	0.406		mg/L		81	75 - 125	
Calcium	38		25.0	65.2		mg/L		108	75 - 125	
Chromium	ND		0.500	0.415		mg/L		83	75 - 125	
Cobalt	0.00047	J	0.500	0.408		mg/L		81	75 - 125	

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Project/Site: CCR Groundwater Monitoring

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

Matrix: Water

Analysis Batch: 375344

Lab Sample ID: 180-127878-3 MS Client Sample ID: WAP-4I **Prep Type: Total Recoverable Prep Batch: 374970**

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Lead	ND		0.500	0.412		mg/L		82	75 - 125	
Lithium	0.0042	J	0.500	0.410		mg/L		81	75 - 125	
Molybdenum	0.0020	J	0.500	0.419		mg/L		83	75 - 125	
Selenium	ND		1.00	0.830		mg/L		83	75 - 125	
Thallium	ND	F2	1.00	0.837		mg/L		84	75 - 125	

Lab Sample ID: 180-127878-3 MSD

Matrix: Water

Analysis Batch: 375344

Client Sample ID: WAP-4I **Prep Type: Total Recoverable** Prep Batch: 374970

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Job ID: 180-127878-1

MSD MSD %Rec. **RPD** Sample Sample Spike Result Qualifier Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec ND 0.250 0.236 95 75 - 125 20 Antimony mg/L Arsenic 0.0045 1.00 1.02 mg/L 101 75 - 125 19 20 Barium 0.17 1.00 1.18 mg/L 101 75 - 125 20 17 Beryllium ND 0.500 0.505 mg/L 101 75 - 125 19 20 0.070 Boron 1.25 1.32 100 75 - 125 7 20 mg/L Cadmium ND 0.500 0.498 mg/L 100 75 - 125 20 20 Calcium 38 25.0 65.8 110 75 - 125 20 mg/L 1 Chromium ND 0.500 0.498 mg/L 100 75 - 125 18 20 Cobalt 0.00047 0.500 0.492 mg/L 98 75 - 125 19 20 Lead ND 0.500 0.495 99 75 - 125 mg/L 18 20 0.0042 0.500 0.485 mg/L 96 75 - 125 20 Lithium 17 0.0020 J 0.500 0.504 100 20 Molybdenum mg/L 75 - 125 18 Selenium ND 1.00 0.987 99 75 - 125 17 20 mg/L Thallium 1.00 103 75 - 125 ND F2 1.03 F2 mg/L 20

Lab Sample ID: MB 180-375103/1-A

Matrix: Water

Analysis Batch: 375344

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

Prep Batch: 375103

_									
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/13/21 11:32	10/14/21 16:50	1
Arsenic	ND		0.0010	0.00031	mg/L		10/13/21 11:32	10/14/21 16:50	1
Barium	ND		0.010	0.0016	mg/L		10/13/21 11:32	10/14/21 16:50	1
Beryllium	ND		0.0010	0.00018	mg/L		10/13/21 11:32	10/14/21 16:50	1
Boron	ND		0.080	0.039	mg/L		10/13/21 11:32	10/14/21 16:50	1
Cadmium	ND		0.0010	0.00022	mg/L		10/13/21 11:32	10/14/21 16:50	1
Calcium	ND		0.50	0.13	mg/L		10/13/21 11:32	10/14/21 16:50	1
Chromium	ND		0.0020	0.0015	mg/L		10/13/21 11:32	10/14/21 16:50	1
Cobalt	ND		0.00050	0.00013	mg/L		10/13/21 11:32	10/14/21 16:50	1
Lead	ND		0.0010	0.00013	mg/L		10/13/21 11:32	10/14/21 16:50	1
Lithium	ND		0.0050	0.0034	mg/L		10/13/21 11:32	10/14/21 16:50	1
Molybdenum	ND		0.0050	0.00061	mg/L		10/13/21 11:32	10/14/21 16:50	1
Selenium	ND		0.0050	0.0015	mg/L		10/13/21 11:32	10/14/21 16:50	1
Thallium	ND		0.0010	0.00015	mg/L		10/13/21 11:32	10/14/21 16:50	1

Project/Site: CCR Groundwater Monitoring

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

Lab Sample ID: LCS 180-375103/2-A

Matrix: Water

Analysis Batch: 375344

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

Prep Batch: 375103

Job ID: 180-127878-1

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	0.250	0.246		mg/L		98	80 - 120	
Arsenic	1.00	0.999		mg/L		100	80 - 120	
Barium	1.00	1.03		mg/L		103	80 - 120	
Beryllium	0.500	0.517		mg/L		103	80 - 120	
Boron	1.25	1.24		mg/L		99	80 - 120	
Cadmium	0.500	0.514		mg/L		103	80 - 120	
Calcium	25.0	25.1		mg/L		100	80 - 120	
Chromium	0.500	0.522		mg/L		104	80 - 120	
Cobalt	0.500	0.500		mg/L		100	80 - 120	
Lead	0.500	0.517		mg/L		103	80 - 120	
Lithium	0.500	0.503		mg/L		101	80 - 120	
Molybdenum	0.500	0.516		mg/L		103	80 - 120	
Selenium	1.00	1.04		mg/L		104	80 - 120	
Thallium	1.00	1.07		mg/L		107	80 - 120	

Lab Sample ID: 180-127878-12 MS

Matrix: Water

Analysis Batch: 375344

Client Sample ID: FIELD BLANK Prep Type: Total Recoverable

Prep Batch: 375103

Sample Sample Spike MS MS %Rec. Result Qualifier **Analyte** Result Qualifier Added Unit D %Rec Limits Antimony ND 0.250 0.243 mg/L 97 75 - 125 Arsenic ND 1.00 0.969 75 - 125 mg/L 97 Barium ND 1.00 1.01 mg/L 101 75 - 125 Beryllium ND 0.500 0.507 mg/L 101 75 - 125 0.057 94 75 - 125 Boron 1.25 1.23 mg/L Cadmium ND 0.500 0.503 101 75 - 125 mg/L 75 - 125 Calcium ND 25.0 25.4 mg/L 101 Chromium ND 0.500 0.509 mg/L 102 75 - 125 Cobalt ND 0.500 0.487 mg/L 97 75 - 125 Lead ND 0.500 0.503 mg/L 101 75 - 125 ND 0.499 Lithium 0.500 100 75 - 125 mg/L Molybdenum ND 0.500 0.502 mg/L 100 75 - 125 Selenium ND 1.00 1.00 100 75 - 125 mg/L Thallium 0.00020 J 1.00 1.03 mg/L 103 75 - 125

Lab Sample ID: 180-127878-12 MSD

Matrix: Water

Analysis Batch: 375344

Client Sample ID: FIELD BLANK Prep Type: Total Recoverable

Prep Batch: 375103

-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND		0.250	0.244		mg/L		98	75 - 125	1	20
Arsenic	ND		1.00	1.01		mg/L		101	75 - 125	4	20
Barium	ND		1.00	1.04		mg/L		104	75 - 125	3	20
Beryllium	ND		0.500	0.517		mg/L		103	75 - 125	2	20
Boron	0.057	J	1.25	1.29		mg/L		99	75 - 125	5	20
Cadmium	ND		0.500	0.520		mg/L		104	75 - 125	3	20
Calcium	ND		25.0	25.8		mg/L		103	75 - 125	2	20
Chromium	ND		0.500	0.528		mg/L		106	75 - 125	4	20
Cobalt	ND		0.500	0.501		mg/L		100	75 - 125	3	20

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Job ID: 180-127878-1

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

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

Lab Sample ID: 180-127878-12 MSD

Matrix: Water

Analysis Batch: 375344

Client Sample ID: FIELD BLANK Prep Type: Total Recoverable

Prep Batch: 375103

Client Sample ID: WAP-4I

Client Sample ID: WAP-4I

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_	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lead	ND		0.500	0.521		mg/L		104	75 - 125	3	20
Lithium	ND		0.500	0.509		mg/L		102	75 - 125	2	20
Molybdenum	ND		0.500	0.519		mg/L		104	75 - 125	3	20
Selenium	ND		1.00	1.05		mg/L		105	75 - 125	5	20
Thallium	0.00020	J	1.00	1.06		mg/L		106	75 - 125	4	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-374161/1-A Client Sample ID: Method Blank

Matrix: Water

Analysis Batch: 374321

Prep Type: Total/NA **Prep Batch: 374161**

MB MB **MDL** Unit Analyte Result Qualifier RL Prepared Analyzed 0.00020 0.00013 mg/L 10/06/21 06:18 10/06/21 16:24 Mercury ND

Lab Sample ID: LCS 180-374161/2-A **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 374321

Prep Batch: 374161 LCS LCS Spike %Rec.

Analyte Added Result Qualifier Unit D %Rec Limits 0.00250 Mercury 0.00240 96 80 - 120 mg/L

Lab Sample ID: 180-127878-3 MS

Matrix: Water Prep Type: Total/NA **Prep Batch: 374161 Analysis Batch: 374321** MS MS Sample Sample Spike %Rec.

%Rec Result Qualifier Added Result Qualifier Limits Analyte Unit D ND 0.00100 0.000913 75 - 125 Mercury mg/L 91

Lab Sample ID: 180-127878-3 MSD

Matrix: Water

Prep Type: Total/NA **Analysis Batch: 374321 Prep Batch: 374161** Sample Sample Spike MSD MSD %Rec. **RPD Analyte** Result Qualifier Added Result Qualifier Unit D %Rec Limits **RPD** Limit Mercury ND 0.00100 0.000904 mg/L 90 75 - 125 20

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-373866/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 373866

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

Lab Sample ID: 180-127878-3 DU Client Sample ID: WAP-4I Prep Type: Total/NA

Matrix: Water

Analysis Batch: 373866 DU DU RPD Sample Sample Result Qualifier Result Qualifier RPD Limit Analyte Unit рН 7.8 HF 7.8 HF SU 0.4

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10/15/2021

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Job ID: 180-127878-1

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-373892/28

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

Matrix: Water

Analysis Batch: 373892

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

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

Lab Sample ID: MB 180-374112/2 **Client Sample ID: Method Blank** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 374112

MB MB

Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 10 Total Dissolved Solids $\overline{\mathsf{ND}}$ 10 mg/L 10/05/21 14:55

Lab Sample ID: LCS 180-374112/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 374112

Spike LCS LCS %Rec. Added Result Qualifier Limits Analyte Unit n %Rec Total Dissolved Solids 422 400 mg/L 80 - 120

Lab Sample ID: 180-127878-3 DU Client Sample ID: WAP-4I **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 374112

Sample Sample DU DU **RPD** Result Qualifier Analyte Result Qualifier Unit RPD Limit **Total Dissolved Solids** 230 228 mg/L

Lab Sample ID: MB 180-374232/2 **Client Sample ID: Method Blank Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 374232

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Total Dissolved Solids ND 10 10 mg/L 10/06/21 11:24

Lab Sample ID: LCS 180-374232/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 374232

LCS LCS Spike %Rec. Added Result Qualifier %Rec Limits Analyte Unit Total Dissolved Solids 422 422 80 - 120 100 mg/L

Lab Sample ID: 180-127878-6 DU Client Sample ID: WAP-6I Prep Type: Total/NA

Matrix: Water

Analysis Batch: 374232

DU DU **RPD** Sample Sample Result Qualifier Result Qualifier Unit D **RPD** Limit Total Dissolved Solids 220 240 mg/L

10/15/2021

Project/Site: CCR Groundwater Monitoring

HPLC/IC

Analysis Batch: 373596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-3	WAP-4I	Total/NA	Water	EPA 9056A	
180-127878-5	WAP-6S	Total/NA	Water	EPA 9056A	
180-127878-6	WAP-6I	Total/NA	Water	EPA 9056A	
180-127878-7	WAP-6D	Total/NA	Water	EPA 9056A	
180-127878-9	WAP-8I	Total/NA	Water	EPA 9056A	
MB 180-373596/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-373596/6	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-127878-3 MS	WAP-4I	Total/NA	Water	EPA 9056A	
180-127878-3 MSD	WAP-4I	Total/NA	Water	EPA 9056A	

Analysis Batch: 373753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-1	WAP-5I	Total/NA	Water	EPA 9056A	
180-127878-2	WAP-5D	Total/NA	Water	EPA 9056A	
180-127878-4	WAP-4D	Total/NA	Water	EPA 9056A	
180-127878-8	WAP-8S	Total/NA	Water	EPA 9056A	
180-127878-8	WAP-8S	Total/NA	Water	EPA 9056A	
180-127878-10	WAP-8D	Total/NA	Water	EPA 9056A	
180-127878-11	DUP-1	Total/NA	Water	EPA 9056A	
180-127878-12	FIELD BLANK	Total/NA	Water	EPA 9056A	
MB 180-373753/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-373753/6	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 374161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-1	WAP-5I	Total/NA	Water	7470A	
180-127878-2	WAP-5D	Total/NA	Water	7470A	
180-127878-3	WAP-4I	Total/NA	Water	7470A	
180-127878-4	WAP-4D	Total/NA	Water	7470A	
180-127878-5	WAP-6S	Total/NA	Water	7470A	
180-127878-6	WAP-6I	Total/NA	Water	7470A	
180-127878-7	WAP-6D	Total/NA	Water	7470A	
180-127878-8	WAP-8S	Total/NA	Water	7470A	
180-127878-9	WAP-8I	Total/NA	Water	7470A	
180-127878-10	WAP-8D	Total/NA	Water	7470A	
180-127878-11	DUP-1	Total/NA	Water	7470A	
180-127878-12	FIELD BLANK	Total/NA	Water	7470A	
MB 180-374161/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-374161/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-127878-3 MS	WAP-4I	Total/NA	Water	7470A	
180-127878-3 MSD	WAP-4I	Total/NA	Water	7470A	

Analysis Batch: 374321

Lab Sample ID 180-127878-1	Client Sample ID WAP-5I	Prep Type Total/NA	Matrix Water	Method EPA 7470A	Prep Batch 374161
		1, 1			
180-127878-2	WAP-5D	Total/NA	Water	EPA 7470A	374161
180-127878-3	WAP-4I	Total/NA	Water	EPA 7470A	374161
180-127878-4	WAP-4D	Total/NA	Water	EPA 7470A	374161
180-127878-5	WAP-6S	Total/NA	Water	EPA 7470A	374161

Eurofins TestAmerica, Pittsburgh

Job ID: 180-127878-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Metals (Continued)

Analysis Batch: 374321 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-6	WAP-6I	Total/NA	Water	EPA 7470A	374161
180-127878-7	WAP-6D	Total/NA	Water	EPA 7470A	374161
180-127878-8	WAP-8S	Total/NA	Water	EPA 7470A	374161
180-127878-9	WAP-8I	Total/NA	Water	EPA 7470A	374161
180-127878-10	WAP-8D	Total/NA	Water	EPA 7470A	374161
180-127878-11	DUP-1	Total/NA	Water	EPA 7470A	374161
180-127878-12	FIELD BLANK	Total/NA	Water	EPA 7470A	374161
MB 180-374161/1-A	Method Blank	Total/NA	Water	EPA 7470A	374161
LCS 180-374161/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	374161
180-127878-3 MS	WAP-4I	Total/NA	Water	EPA 7470A	374161
180-127878-3 MSD	WAP-4I	Total/NA	Water	EPA 7470A	374161

Prep Batch: 374970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-1	WAP-5I	Total Recoverable	Water	3005A	
180-127878-2	WAP-5D	Total Recoverable	Water	3005A	
180-127878-3	WAP-4I	Total Recoverable	Water	3005A	
180-127878-4	WAP-4D	Total Recoverable	Water	3005A	
180-127878-5	WAP-6S	Total Recoverable	Water	3005A	
180-127878-6	WAP-6I	Total Recoverable	Water	3005A	
180-127878-7	WAP-6D	Total Recoverable	Water	3005A	
180-127878-8	WAP-8S	Total Recoverable	Water	3005A	
180-127878-9	WAP-8I	Total Recoverable	Water	3005A	
180-127878-10	WAP-8D	Total Recoverable	Water	3005A	
180-127878-11	DUP-1	Total Recoverable	Water	3005A	
MB 180-374970/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-374970/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-127878-3 MS	WAP-4I	Total Recoverable	Water	3005A	
180-127878-3 MSD	WAP-4I	Total Recoverable	Water	3005A	

Prep Batch: 375103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-12	FIELD BLANK	Total Recoverable	Water	3005A	
MB 180-375103/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-375103/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-127878-12 MS	FIELD BLANK	Total Recoverable	Water	3005A	
180-127878-12 MSD	FIELD BLANK	Total Recoverable	Water	3005A	

Analysis Batch: 375344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-1	WAP-5I	Total Recoverable	Water	EPA 6020A	374970
180-127878-2	WAP-5D	Total Recoverable	Water	EPA 6020A	374970
180-127878-3	WAP-4I	Total Recoverable	Water	EPA 6020A	374970
180-127878-4	WAP-4D	Total Recoverable	Water	EPA 6020A	374970
180-127878-5	WAP-6S	Total Recoverable	Water	EPA 6020A	374970
180-127878-6	WAP-6I	Total Recoverable	Water	EPA 6020A	374970
180-127878-7	WAP-6D	Total Recoverable	Water	EPA 6020A	374970
180-127878-8	WAP-8S	Total Recoverable	Water	EPA 6020A	374970
180-127878-9	WAP-8I	Total Recoverable	Water	EPA 6020A	374970
180-127878-10	WAP-8D	Total Recoverable	Water	EPA 6020A	374970
180-127878-11	DUP-1	Total Recoverable	Water	EPA 6020A	374970

Eurofins TestAmerica, Pittsburgh

Job ID: 180-127878-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Metals (Continued)

Analysis Batch: 375344 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-12	FIELD BLANK	Total Recoverable	Water	EPA 6020A	375103
MB 180-374970/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	374970
MB 180-375103/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	375103
LCS 180-374970/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	374970
LCS 180-375103/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	375103
180-127878-3 MS	WAP-4I	Total Recoverable	Water	EPA 6020A	374970
180-127878-3 MSD	WAP-4I	Total Recoverable	Water	EPA 6020A	374970
180-127878-12 MS	FIELD BLANK	Total Recoverable	Water	EPA 6020A	375103
180-127878-12 MSD	FIELD BLANK	Total Recoverable	Water	EPA 6020A	375103

General Chemistry

Analysis Batch: 373866

Lab Sample ID 180-127878-3	Client Sample ID WAP-4I	Prep Type Total/NA	Matrix Water	Method EPA 9040C	Prep Batch
LCS 180-373866/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-127878-3 DU	WAP-4I	Total/NA	Water	EPA 9040C	

Analysis Batch: 373892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-1	WAP-5I	Total/NA	Water	EPA 9040C	
180-127878-2	WAP-5D	Total/NA	Water	EPA 9040C	
180-127878-4	WAP-4D	Total/NA	Water	EPA 9040C	
180-127878-5	WAP-6S	Total/NA	Water	EPA 9040C	
180-127878-6	WAP-6I	Total/NA	Water	EPA 9040C	
180-127878-7	WAP-6D	Total/NA	Water	EPA 9040C	
180-127878-8	WAP-8S	Total/NA	Water	EPA 9040C	
180-127878-9	WAP-8I	Total/NA	Water	EPA 9040C	
180-127878-10	WAP-8D	Total/NA	Water	EPA 9040C	
180-127878-11	DUP-1	Total/NA	Water	EPA 9040C	
180-127878-12	FIELD BLANK	Total/NA	Water	EPA 9040C	
LCS 180-373892/28	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 374112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-1	WAP-5I	Total/NA	Water	SM 2540C	
180-127878-2	WAP-5D	Total/NA	Water	SM 2540C	
180-127878-3	WAP-4I	Total/NA	Water	SM 2540C	
180-127878-4	WAP-4D	Total/NA	Water	SM 2540C	
180-127878-11	DUP-1	Total/NA	Water	SM 2540C	
180-127878-12	FIELD BLANK	Total/NA	Water	SM 2540C	
MB 180-374112/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-374112/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-127878-3 DU	WAP-4I	Total/NA	Water	SM 2540C	

Analysis Batch: 374232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method F	Prep Batch
180-127878-5	WAP-6S	Total/NA	Water	SM 2540C	
180-127878-6	WAP-6I	Total/NA	Water	SM 2540C	
180-127878-7	WAP-6D	Total/NA	Water	SM 2540C	
180-127878-8	WAP-8S	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

Job ID: 180-127878-1

Client: Haley & Aldrich, Inc.

Job ID: 180-127878-1

Project/Site: CCR Groundwater Monitoring

General Chemistry (Continued)

Analysis Batch: 374232 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127878-9	WAP-8I	Total/NA	Water	SM 2540C	
180-127878-10	WAP-8D	Total/NA	Water	SM 2540C	
MB 180-374232/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-374232/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-127878-6 DU	WAP-6I	Total/NA	Water	SM 2540C	

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Company :emiT\esteO Relinquished by: Relinquished by: 4521 12.PJ.P ンた Received by: Date/Time: seljudnispeg pk: lethod of Shipment: Empty Kit Relinquished by: Special Instructions/QC Requirements: Deliverable Requested: I, III, IV, Other (specify) ПОПКПОМП Archive For Radiological Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client

Return To Client

Return To Client Possible Hazard Identification
Non-Hazard Months Skin Irritant Poison B 01/1 18 -9×W 02 21 0521 58 -9×m 180-127878 Chain of Custody 75511 19 - gran I9 -dvm L501 29-98W 0001 15.29.6 7771 Qh-dvm Ih-dVM 9/11 Q5 -dvm Lh01 256 12.85.6 IS -9AW Preservation Code: Special Instructions/Note: Perform Sample Date Sample Identification **Total Num** BT=Tissue, A=Alt G=grab) 9315_Ra226, 9320_Ra228 2540C_Calcd - TDS (C=comb Sample Type 9056A_ORGEM Sample HeliMSD (Yes or No **XintsM** Vectren Culley Station \$1031081 Z - other (specify) 280 AGB - J 9-7 Hd - M K-EDTA mon. breting@atcassociates.com V-MCAA J- DI Water enotecA - U :# OA T - TSP Dodecahydrate bioA oidnoosA - H FB-242026. AB-241410 (I9T)0278-41S-408 G - Amchior 2 - H2SO4 R - Na2S203 HO9M - 3 Compliance Project: △ Yes △ No O - Na2503 E - NaHSO4 :qiZ ,ətstö P - Na204S D - Nitric Acid C - Zn Acetate siloqensibn SOSNSA - O anoN - N HOSN - 8 TA Requested (days): M - Hexane 00f Suite Suite 100 reservation Codes: Due Date Requested: Analysis Requested ATC Group Services LLC. 2551 - 574 - 515 Page 1 of 1 Men.Hayes@Eurofinset.com **Nark Breting** :96e State of Origin:

Cooler Temperature(s) °C and Other Remarks:

201101U9 Sinitonment Testing

1.80-73122-14168.1

Carrier Tracking No(s):

Ver: 06/08/2021

Chain of Custody Record

200 11:11

TEU/GIMP TestAmerica, Pittsburgh

Phone: 412-963-7058 Fax: 412-963-2468

Client Information

Pittsburgh, PA 15238

ON A SOY A

Custody Seals Intact:

Custody Seal No.:

Page 32 of 35

Hayes, Ken

301 Alpha Drive RIDC Park LS02/21/01 TestAmerica, Pittsburgh

Phone: 412-963-7058 Fax: 412-963-2468

Pittsburgh, PA 15238

Chain of Custody Record Page 33 of 35

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l Instructions/Note:	Specia	Total Number							9315_Ra226, 9320_Ra228	2540C_Calcd - TDS	6020A, 7470A	9040C, 9056A_ORGFM_28D	Partorn MS/MSD (Mas	Field Filtered Sample (Yes or No)	XiTJSM (www.w) Saened, biloges (soletzswe) (MANA)	Sample Type (C=comp, G=grab)	Sample	Sample Date		ope Identification
	Other:	of co							20 R	SQ.		RGFI	SD	Samp				:#MOSS		
Z - other (specify)	F-ED∀	containers	ł						228			M_280	(1) (3)	le (Ye				Project#: 18016014		։ Name: en Culley West
U - Acetone ∨ - MCAA W - PH 4-5	1 - DI Water K - EDTA	878											(ONINO)	S or				:# OM		moo.eatesociates.com
	G - Amchlor H - Ascorbic Ac					1							П	S S		-	241410	FB-242026. AB-		(laT)02Y8-b12
Q - Na2S203	E - MGOH													П		ON 7	7 Səy ८ ⊅	Compliance Projec		9529
SOBN2A - O 840864 - Q	C - Zn Acetate D - Nitric Acid																		-	siloqsn qiz
M - Hexane M - None	A - HCL B - NaOH												B	П	_	- 2	J.	SD) betseuesfed (da		Centerpoint Drive Suite 100
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1.8904	180-74384-1 COC No:			(s)oN	scking	arrier Tr	20				40.0	Z.	uəy		Lab F Hay	/1.	41	Sampler: 2c		noisemoinl in

Environment Testing America sniforus 🐯

Ver: 06/08/2021

Job Number: 180-127878-1

Login Number: 127878

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

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.	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	

Eurofins TestAmerica, Pittsburgh

Job Number: 180-127878-1

Login Number: 127878

List Number: 2 Creator: Watson, Debbie

 ${\bf List\ Source:\ Eurofins\ TestAmerica,\ Pittsburgh}$

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



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-127924-1

Client Project/Site: CCR Groundwater Monitoring

For:

Haley & Aldrich, Inc. 465 Medford St Suite 2200 Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Kuntll Haye

Authorized for release by: 10/19/2021 1:18:33 PM

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@Eurofinset.com

.....LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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

Laboratory Job ID: 180-127924-1

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-127924-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-127924-1

Comments

No additional comments.

Receipt

The samples were received on 10/1/2021 10:15 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 was 2.5° C.

GC Semi VOA

Method 9056A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 180-373879 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Metals

Method 6020A: The continuing calibration blank (CCB) associated with batch 180-375723 recovered above the upper control limit for sodium. The samples associated with this CCB were 10X the CCB concentration for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCB 180-375723/74), (CCB 180-375723/84), (180-127915-R-1-D ^20), (180-127915-R-1-E MS ^20), (180-127915-R-1-D PDS ^20) and (180-127915-R-1-D SD ^100).

Method 6020A: The following samples were diluted to bring the concentration of target analytes within the calibration range: WAP-7S (180-127924-2), WAP-7D (180-127924-3), (180-127915-R-1-D ^20), (180-127915-R-1-E MS ^20), (180-127915-R-1-F MSD ^20), (180-127915-R-1-D PDS ^20) and (180-127915-R-1-D SD ^100). Elevated reporting limits (RLs) are provided.

Method 6020A: The continuing calibration blank (CCB) associated with batch 180-375723 recovered above the upper control limit for nickel. The samples associated with this CCB were non-detects -or- less than the RL for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCB 180-375723/93), (180-127915-R-1-D), (180-127915-R-1-E MS), (180-127915-R-1-D PDS) and (180-127915-R-1-D SD ^5).

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

General Chemistry

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

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Job ID: 180-127924-1

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-127924-1

Project/Site: CCR Groundwater Monitoring

Qualifiers

HPLC/IC

Qualifier Qualifier Description

F1 MS and/or MSD recovery exceeds control limits.

Metals

Qualifier Qualifier Description

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

General Chemistry

Qualifier Description

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

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

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc. Job ID: 180-127924-1

Project/Site: CCR Groundwater Monitoring

Laboratory: Eurofins TestAmerica, 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	06-27-21 *
California	State	2891	04-30-22
Connecticut	State	PH-0688	09-30-22
Florida	NELAP	E871008	06-30-22
Georgia	State	PA 02-00416	04-30-22
Illinois	NELAP	004375	06-30-22
Kansas	NELAP	E-10350	01-31-22
Kentucky (UST)	State	162013	04-30-22
Kentucky (WW)	State	KY98043	12-31-21
Louisiana	NELAP	04041	06-30-22
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-21
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	04-05-22
New Jersey	NELAP	PA005	06-30-22
New York	NELAP	11182	04-01-22
North Carolina (WW/SW)	State	434	12-31-21
North Dakota	State	R-227	04-30-22
Oregon	NELAP	PA-2151	02-06-22
Pennsylvania	NELAP	02-00416	04-30-22
Rhode Island	State	LAO00362	12-31-21
South Carolina	State	89014	04-30-22
Texas	NELAP	T104704528	03-31-22
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-22
Virginia	NELAP	10043	09-15-22
West Virginia DEP	State	142	01-31-22
Wisconsin	State	998027800	08-31-22

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

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-127924-1	WAP-3D	Water	09/30/21 08:05	10/01/21 10:15
180-127924-2	WAP-7S	Water	09/30/21 08:56	10/01/21 10:15
180-127924-3	WAP-7D	Water	09/30/21 09:30	10/01/21 10:15

Job ID: 180-127924-1

Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

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

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:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Job ID: 180-127924-1

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Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-3D Lab Sample ID: 180-127924-1

Date Collected: 09/30/21 08:05 **Matrix: Water**

Date Received: 10/01/21 10:15

Prep Type Total/NA	Batch Type Analysis Instrumen	Batch Method EPA 9056A t ID: CHIC2100A	Run	Pactor 1	Initial Amount	Final Amount	Batch Number 373753	Prepared or Analyzed 10/02/21 13:56	Analyst JRB	Lab TAL PIT
Total/NA	Analysis Instrumen	EPA 9056A t ID: CHIC2100A		5			373753	10/02/21 14:12	JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: NEMO		1	50 mL	50 mL	374972 375365	10/12/21 15:57 10/14/21 13:03		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGY		1	25 mL	25 mL	374160 374321	10/06/21 06:17 10/06/21 16:13		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			374096	10/05/21 14:11	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	374236	10/06/21 11:39	KMM	TAL PIT

Client Sample ID: WAP-7S Lab Sample ID: 180-127924-2

Date Collected: 09/30/21 08:56 **Matrix: Water** Date Received: 10/01/21 10:15

	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 t ID: INTEGRION		1			373879	10/04/21 11:24	JRB	TAL PIT
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		5			373879	10/04/21 11:42	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374972	10/12/21 15:57	MM1	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		10			375723	10/16/21 09:05	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374972	10/12/21 15:57	MM1	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			375365	10/14/21 13:08	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	374160	10/06/21 06:17	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			374321	10/06/21 16:14	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			374096	10/05/21 14:12	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	374236	10/06/21 11:39	KMM	TAL PIT

Client Sample ID: WAP-7D Lab Sample ID: 180-127924-3

Date Collected: 09/30/21 09:30 Date Received: 10/01/21 10:15

	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			373753	10/02/21 14:28	JRB	TAL PIT
	Instrumer	t ID: CHIC2100A								

Eurofins TestAmerica, Pittsburgh

Page 8 of 20

Job ID: 180-127924-1

Matrix: Water

Lab Chronicle

Client: Haley & Aldrich, Inc.

Job ID: 180-127924-1

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-7D Lab Sample ID: 180-127924-3

Date Collected: 09/30/21 09:30 Matrix: Water
Date Received: 10/01/21 10:15

Prep Type Total/NA	Batch Type Analysis	Batch Method EPA 9056A	Run	Factor	Initial Amount	Final Amount	Batch Number 373753	Prepared or Analyzed 10/02/21 14:45	Analyst JRB	Lab TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A		10	50 mL	50 mL	374972 375723	10/12/21 15:57 10/16/21 09:09	MM1	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A at ID: NEMO		1	50 mL	50 mL	374972 375365	10/12/21 15:57 10/14/21 13:20		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A nt ID: HGY		1	25 mL	25 mL	374160 374321	10/06/21 06:17 10/06/21 16:15		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			374096	10/05/21 14:17	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	50 mL	100 mL	374236	10/06/21 11:39	KMM	TAL PIT

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

MM1 = Mary Beth Miller

RJR = Ron Rosenbaum

Batch Type: Analysis

JRB = James Burzio

KMM = Kendric Moore

MJH = Michael Houde

RJR = Ron Rosenbaum

RSK = Robert Kurtz

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Job ID: 180-127924-1

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

Date Received: 10/01/21 10:15

Client Sample ID: WAP-3D Lab Sample ID: 180-127924-1

Date Collected: 09/30/21 08:05 **Matrix: Water**

Date Received: 10/01/21 10:15

Method: EPA 9056A	lethod: EPA 9056A - Anions, Ion Chromatography												
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac				
Chloride	42		1.0	0.71	mg/L			10/02/21 13:56	1				
Fluoride	0.48		0.10	0.026	mg/L			10/02/21 13:56	1				
Sulfate	190		5.0	3.8	mg/L			10/02/21 14:12	5				

Method: EPA 6020A - I	Metals (ICP/MS) - To	tal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:57	10/14/21 13:03	1
Arsenic	ND		0.0010	0.00031	mg/L		10/12/21 15:57	10/14/21 13:03	1
Barium	0.015		0.010	0.0016	mg/L		10/12/21 15:57	10/14/21 13:03	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:57	10/14/21 13:03	1
Boron	5.1		0.080	0.039	mg/L		10/12/21 15:57	10/14/21 13:03	1
Cadmium	0.00026	J	0.0010	0.00022	mg/L		10/12/21 15:57	10/14/21 13:03	1
Calcium	120		0.50	0.13	mg/L		10/12/21 15:57	10/14/21 13:03	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:57	10/14/21 13:03	1
Cobalt	0.00085		0.00050	0.00013	mg/L		10/12/21 15:57	10/14/21 13:03	1
Lead	0.00025	J	0.0010	0.00013	mg/L		10/12/21 15:57	10/14/21 13:03	1
Lithium	0.078		0.0050	0.0034	mg/L		10/12/21 15:57	10/14/21 13:03	1
Molybdenum	0.44		0.0050	0.00061	mg/L		10/12/21 15:57	10/14/21 13:03	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:57	10/14/21 13:03	1
Thallium	0.00026	J	0.0010	0.00015	mg/L		10/12/21 15:57	10/14/21 13:03	1

Method: EPA 7470A - Mercu	ıry (CVAA)							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013	mg/L		10/06/21 06:17	10/06/21 16:13	1
General Chemistry								

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	570		10	10	mg/L			10/06/21 11:39	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0	HF	0.1	0.1	SU			10/05/21 14:11	1

Client Sample ID: WAP-7S Lab Sample ID: 180-127924-2 Date Collected: 09/30/21 08:56 **Matrix: Water**

Method: EPA 9056A	- Anions, Ion Chroma	atography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	58		1.0	0.71	mg/L			10/04/21 11:24	1
Fluoride	0.42		0.10	0.026	mg/L			10/04/21 11:24	1
Sulfate	270	F1	5.0	3.8	mg/L			10/04/21 11:42	5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00074	J	0.0020	0.00038	mg/L		10/12/21 15:57	10/14/21 13:08	1
Arsenic	0.0050		0.0010	0.00031	mg/L		10/12/21 15:57	10/14/21 13:08	1
Barium	0.036		0.010	0.0016	mg/L		10/12/21 15:57	10/14/21 13:08	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:57	10/14/21 13:08	1
Boron	9.8		0.80	0.39	mg/L		10/12/21 15:57	10/16/21 09:05	10
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:57	10/14/21 13:08	1
Calcium	140		0.50	0.13	mg/L		10/12/21 15:57	10/14/21 13:08	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:57	10/14/21 13:08	1

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10/19/2021

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-7S

Date Collected: 09/30/21 08:56 Date Received: 10/01/21 10:15 Lab Sample ID: 180-127924-2

Matrix: Water

Job ID: 180-127924-1

	Method: EPA 6020A - Metals	(ICP/MS) -	- To	otal	Recoverable	(Continued)	
н							

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	.00019 J	0.00050	0.00013	mg/L		10/12/21 15:57	10/14/21 13:08	1
Lead	ND	0.0010	0.00013	mg/L		10/12/21 15:57	10/14/21 13:08	1
Lithium	0.12	0.0050	0.0034	mg/L		10/12/21 15:57	10/14/21 13:08	1
Molybdenum	0.22	0.0050	0.00061	mg/L		10/12/21 15:57	10/14/21 13:08	1
Selenium	ND	0.0050	0.0015	mg/L		10/12/21 15:57	10/14/21 13:08	1
Thallium	ND	0.0010	0.00015	mg/L		10/12/21 15:57	10/14/21 13:08	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013 mg/L		10/06/21 06:17	10/06/21 16:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	630		10	10	mg/L			10/06/21 11:39	1
A l4 -	D 14		ъ.		1114	_	B		D11 E
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

Lab Sample ID: 180-127924-3 **Client Sample ID: WAP-7D Matrix: Water**

Date Collected: 09/30/21 09:30

Date Received: 10/01/21 10:15

Method: EPA 9056A - Anic	ons, Ion Chromatography
Analyto	Posult Qualifier

Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Chloride	180	1.0	0.71 mg/L		10/02/21 14:28	1
Fluoride	0.50	0.10	0.026 mg/L		10/02/21 14:28	1
Sulfate	1000	10	7.6 mg/L		10/02/21 14:45	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:57	10/14/21 13:20	1
Arsenic	0.0010		0.0010	0.00031	mg/L		10/12/21 15:57	10/14/21 13:20	1
Barium	0.047		0.010	0.0016	mg/L		10/12/21 15:57	10/14/21 13:20	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:57	10/14/21 13:20	1
Boron	14		0.80	0.39	mg/L		10/12/21 15:57	10/16/21 09:09	10
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:57	10/14/21 13:20	1
Calcium	430		0.50	0.13	mg/L		10/12/21 15:57	10/14/21 13:20	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:57	10/14/21 13:20	1
Cobalt	0.0065		0.00050	0.00013	mg/L		10/12/21 15:57	10/14/21 13:20	1
Lead	0.00022	J	0.0010	0.00013	mg/L		10/12/21 15:57	10/14/21 13:20	1
Lithium	0.063		0.0050	0.0034	mg/L		10/12/21 15:57	10/14/21 13:20	1
Molybdenum	0.34		0.0050	0.00061	mg/L		10/12/21 15:57	10/14/21 13:20	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:57	10/14/21 13:20	1
Thallium	ND		0.0010	0.00015	ma/l		10/12/21 15:57	10/14/21 13:20	1

Method:	FΡΔ	7470A	- Mercury	$(CV\Delta\Delta)$

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013 mg/L		10/06/21 06:17	10/06/21 16:15	1

General Chemistry

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2100	20	20 mg/L			10/06/21 11:39	1

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Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-127924-1

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-7D Lab Sample ID: 180-127924-3 Date Collected: 09/30/21 09:30

Matrix: Water

Date Received: 10/01/21 10:15

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.6	HF	0.1	0.1	SU			10/05/21 14:17	1

Project/Site: CCR Groundwater Monitoring

Job ID: 180-127924-1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-373753/7

Matrix: Water

Analyte

Chloride

Fluoride

Sulfate

Analysis Batch: 373753

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

MB MB Result Qualifier RL **MDL** Unit Dil Fac D **Prepared** Analyzed ND 1.0 0.71 mg/L 10/02/21 09:20 0.026 mg/L ND 0.10 10/02/21 09:20 ND 1.0 0.76 mg/L 10/02/21 09:20

Lab Sample ID: LCS 180-373753/6

Matrix: Water

Analysis Batch: 373753

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	52.8		mg/L		106	80 - 120	
Fluoride	2.50	2.84		mg/L		114	80 - 120	
Sulfate	50.0	53.6		mg/L		107	80 - 120	

Lab Sample ID: MB 180-373879/7

Matrix: Water

Analysis Batch: 373879

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

Client Sample ID: Lab Control Sample

MB MB Result Qualifier Dil Fac Analyte RL **MDL** Unit D **Prepared** Analyzed Chloride ND 1.0 0.71 mg/L 10/04/21 10:39 1 Fluoride ND 0.10 0.026 mg/L 10/04/21 10:39 10/04/21 10:39 Sulfate ND 1.0 0.76 mg/L

Lab Sample ID: LCS 180-373879/6

Matrix: Water

Analysis Batch: 373879

	Spike	LCS	LCS			%Rec.	
Analyte	Added	Result	Qualifier	Unit	D %Rec	Limits	
Chloride	50.0	50.4		mg/L	101	80 - 120	
Fluoride	2.50	2.46		mg/L	98	80 - 120	
Sulfate	50.0	49.3		mg/L	99	80 - 120	

Lab Sample ID: 180-127924-2 MS

Matrix: Water

IVIALITIA. VVALET									Fieb is	pe. Iolai/NA
Analysis Batch: 373879										
-	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50		250	208		ma/l		96	80 120	

Lab Sample ID: 180-127924-2 MSD

Matrix: Water

Analysis Batch: 373879

Analyte	Result Qualifier	Added	Result Qualifi	er Unit	D	%Rec	Limits	
Chloride	59	250	298	mg/L		96	80 - 120	
Fluoride	0.38 J	12.5	13.1	mg/L		102	80 - 120	
Sulfate	270 F1	250	448 F1	mg/L		73	80 - 120	

Spike MSD MSD %Rec. **RPD** Sample Sample **Analyte** Result Qualifier Added Result Qualifier Unit %Rec Limits **RPD** Limit Chloride 59 250 286 mg/L 91 80 - 120 4 15 Fluoride 0.38 J 97 12.5 12.5 mg/L 80 - 120 5 15 Sulfate 270 F1 250 66 80 - 120 430 F1 mg/L 15

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Client Sample ID: WAP-7S

Prep Type: Total/NA

Client Sample ID: WAP-7S

Pren Type: Total/NA

Prep Type: Total/NA

Project/Site: CCR Groundwater Monitoring

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

Lab Sample ID: MB 180-374972/1-A

Matrix: Water

Analysis Batch: 375365

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 374972

Job ID: 180-127924-1

MB MB Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac **Analyte** Antimony ND 0.0020 0.00038 mg/L 10/12/21 15:57 10/14/21 12:40 Arsenic ND 0.0010 0.00031 mg/L 10/12/21 15:57 10/14/21 12:40 ND 10/12/21 15:57 10/14/21 12:40 Barium 0.010 0.0016 mg/L Beryllium 0.0010 0.00018 mg/L 10/12/21 15:57 10/14/21 12:40 ND 10/12/21 15:57 10/14/21 12:40 Boron ND 0.080 0.039 mg/L Cadmium ND 0.0010 0.00022 mg/L 10/12/21 15:57 10/14/21 12:40 Calcium ND 0.50 0.13 mg/L 10/12/21 15:57 10/14/21 12:40 Chromium ND 0.0020 0.0015 mg/L 10/12/21 15:57 10/14/21 12:40 10/12/21 15:57 10/14/21 12:40 Cobalt ND 0.00050 0.00013 mg/L Lead ND 0.0010 0.00013 mg/L 10/12/21 15:57 10/14/21 12:40 10/12/21 15:57 10/14/21 12:40 Lithium ND 0.0050 0.0034 mg/L Molybdenum ND 0.0050 0.00061 mg/L 10/12/21 15:57 10/14/21 12:40 Selenium ND 0.0050 0.0015 mg/L 10/12/21 15:57 10/14/21 12:40 Thallium ND 0.0010 0.00015 mg/L 10/12/21 15:57 10/14/21 12:40

Lab Sample ID: LCS 180-374972/2-A

Matrix: Water

Analysis Batch: 375365

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

Prep Batch: 374972

Analysis Batch: 970000	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	0.250	0.231		mg/L		93	80 - 120
Arsenic	1.00	0.869		mg/L		87	80 - 120
Barium	1.00	0.832		mg/L		83	80 - 120
Beryllium	0.500	0.420		mg/L		84	80 - 120
Boron	1.25	1.20		mg/L		96	80 - 120
Cadmium	0.500	0.426		mg/L		85	80 - 120
Calcium	25.0	26.0		mg/L		104	80 - 120
Chromium	0.500	0.413		mg/L		83	80 - 120
Cobalt	0.500	0.406		mg/L		81	80 - 120
Lead	0.500	0.411		mg/L		82	80 - 120
Lithium	0.500	0.417		mg/L		83	80 - 120
Molybdenum	0.500	0.430		mg/L		86	80 - 120
Selenium	1.00	0.861		mg/L		86	80 - 120
Thallium	1.00	0.850		mg/L		85	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-374160/1-A

Matrix: Water

Analysis Batch: 374321

MB MB

 Analyte
 Result
 Qualifier
 RL
 MDL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Mercury
 ND
 0.00020
 0.00013
 mg/L
 10/06/21 06:17
 10/06/21 15:55
 1

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Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 374160

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10/19/2021

LCS LCS

0.00227

Result Qualifier

Unit

mg/L

mg/L

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-127924-1

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

Lab Sample ID: LCS 180-374160/2-A

Matrix: Water

Analyte

Mercury

Analysis Batch: 374321

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

Prep Batch: 374160

%Rec.

Limits 80 - 120

D %Rec

91

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-374096/1

Matrix: Water

Analysis Batch: 374096

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

10

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec 7.00 7.0 SU pН

Spike

Added

0.00250

Limits 100 99 - 101

Client Sample ID: Lab Control Sample

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

Lab Sample ID: MB 180-374236/2

Matrix: Water

Analysis Batch: 374236

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Type: Total/NA

MB MB

Result Qualifier RL **MDL** Unit Dil Fac Analyte **Prepared** Analyzed Total Dissolved Solids 10 10/06/21 11:39 ND 10 mg/L

Lab Sample ID: LCS 180-374236/1

Matrix: Water

Analysis Batch: 374236

Spike LCS LCS %Rec. Added Result Qualifier Limits Analyte Unit D %Rec Total Dissolved Solids 422 406

96 80 - 120

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10/19/2021

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

HPLC/IC

Analysis Batch: 373753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	EPA 9056A	
180-127924-1	WAP-3D	Total/NA	Water	EPA 9056A	
180-127924-3	WAP-7D	Total/NA	Water	EPA 9056A	
180-127924-3	WAP-7D	Total/NA	Water	EPA 9056A	
MB 180-373753/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-373753/6	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 373879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-2	WAP-7S	Total/NA	Water	EPA 9056A	
180-127924-2	WAP-7S	Total/NA	Water	EPA 9056A	
MB 180-373879/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-373879/6	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-127924-2 MS	WAP-7S	Total/NA	Water	EPA 9056A	
180-127924-2 MSD	WAP-7S	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 374160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	7470A	
180-127924-2	WAP-7S	Total/NA	Water	7470A	
180-127924-3	WAP-7D	Total/NA	Water	7470A	
MB 180-374160/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-374160/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 374321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	EPA 7470A	374160
180-127924-2	WAP-7S	Total/NA	Water	EPA 7470A	374160
180-127924-3	WAP-7D	Total/NA	Water	EPA 7470A	374160
MB 180-374160/1-A	Method Blank	Total/NA	Water	EPA 7470A	374160
LCS 180-374160/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	374160

Prep Batch: 374972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total Recoverable	Water	3005A	
180-127924-2	WAP-7S	Total Recoverable	Water	3005A	
180-127924-3	WAP-7D	Total Recoverable	Water	3005A	
MB 180-374972/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-374972/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 375365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total Recoverable	Water	EPA 6020A	374972
180-127924-2	WAP-7S	Total Recoverable	Water	EPA 6020A	374972
180-127924-3	WAP-7D	Total Recoverable	Water	EPA 6020A	374972
MB 180-374972/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	374972
LCS 180-374972/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	374972

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Job ID: 180-127924-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Metals

Analysis Batch: 375723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-2	WAP-7S	Total Recoverable	Water	EPA 6020A	374972
180-127924-3	WAP-7D	Total Recoverable	Water	EPA 6020A	374972

General Chemistry

Analysis Batch: 374096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	EPA 9040C	
180-127924-2	WAP-7S	Total/NA	Water	EPA 9040C	
180-127924-3	WAP-7D	Total/NA	Water	EPA 9040C	
LCS 180-374096/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 374236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	SM 2540C	
180-127924-2	WAP-7S	Total/NA	Water	SM 2540C	
180-127924-3	WAP-7D	Total/NA	Water	SM 2540C	
MB 180-374236/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-374236/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Job ID: 180-127924-1

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

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Environment Testing America

Client Information	Sampler: 50	n /	471		PM: yes, Ke	n					Ca	arrier Trac	king No(s	s):		COC No: 180-74384-140	68.2
Client Contact: Mark Breting	Phone: 317- 4	73-	1325	E-M Kei	lail: n.Hayes	s@Eu	ırofins	set.co	om		St	ate of Orig	jin: J	-N		Page: Page 2 of 2	
Company: Atlas Technical Consultants LLC			PWSID:		T				An	alysis	Requ	ested				Job #:	
Address: 7988 Centerpoint Drive Suite 100	Due Date Request	ed:							Ĭ	1		T		TT		Preservation Co	des:
City: Indianapolis	TAT Requested (d	ays):			111											A - HCL B - NaOH C - Zn Acetate	M - Hexane N - None O - AsNaO2
State, Zip: IN, 46256	Compliance Proje	ct: A Yes	Δ No		-1100		П									D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3
Phone: 864-214-8750(Tel)	PO#: FB-242026. AB											+				F - MeOH G - Amchlor H - Ascorbic Acid	R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate
Email: mark.breting@atcassociates.com	WO #:				o No										ø	I - Ice J - DI Water	U - Acetone V - MCAA
Project Name: Vectren Culley West	Project #: 18016014	-			(Yes	78D			28					1	containers	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)
Site:	SSOW#:				Sample So/(%e	RGFM		Sa	20_Ra2	-					of con	Other:	
		Sample	Sample Type (C=comp,	Matrix (w=water, S=solid, O=waste/oil.	Field Filtered Sample (Yes or	9040C, 9056A_ORGFM_28D	6020A, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228						Total Number		
Sample Identification	Sample Date	Time	G=grab)	BT=Tissue, A=Air		7	1		93.						10	Special Ir	nstructions/Note:
4.AP- 3D	9.30.21	805	G	w	\mathcal{H}	N	O.	N	1						+		
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					++		\vdash		_	-		171					
Possible Hazard Identification Non-Hazard Flammable Skin Irritant	Poison B Linkon		Radiological				Disp Return				be ass	essed i	f samp		1	ned longer than nive For	1 month) Months
Deliverable Requested: I, II, III, IV, Other (specify)	TOIGOT D CTIATA	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	tadiological							Require					7 11 011		
Empty Kit Relinquished by:		Date:			Time:						_	Metho	d of Ship	ment:			
Relinquished by:	Date/Time: 2-3	0.21/	1530	Company	te	Rec	ejveoro	9	/				Date	o/Time:	21	1015	Company
Relinquished by:	Date/Time:			Company		Rec	eived b	X					Date	e/Time:			Company
Relinquished by:	Date/Time:			Company		Rec	eived b	y:					Date	e/Time:			Company
Custody Seals Intact: Custody Seal No.:						Coo	ler Ten	perati	ure(s)	°C and Ot	her Rem	arks:					

Job Number: 180-127924-1

Login Number: 127924

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Abernathy, Eric L

oreator. Abernatny, Line 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	
s 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	

Job Number: 180-127924-1

Login Number: 127924

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 2

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)	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	



Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive **RIDC Park** Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-127924-1

Client Project/Site: CCR Groundwater Monitoring

Revision: 1

For:

Haley & Aldrich, Inc. 465 Medford St **Suite 2200** Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Authorized for release by: 11/4/2021 10:16:14 AM

Kuth Haye

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@Eurofinset.com

·····LINKS ······

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-127924-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-127924-1

Comments

No additional comments.

Receipt

The samples were received on 10/1/2021 10:15 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 was 2.5° C.

GC Semi VOA

Method 9056A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 180-373879 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Metals

Method 6020A: The continuing calibration blank (CCB) associated with batch 180-375723 recovered above the upper control limit for sodium. The samples associated with this CCB were 10X the CCB concentration for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCB 180-375723/74), (CCB 180-375723/84), (180-127915-R-1-D ^20), (180-127915-R-1-E MS ^20), (180-127915-R-1-D PDS ^20) and (180-127915-R-1-D SD ^100).

Method 6020A: The following samples were diluted to bring the concentration of target analytes within the calibration range: WAP-7S (180-127924-2), WAP-7D (180-127924-3), (180-127915-R-1-D ^20), (180-127915-R-1-E MS ^20), (180-127915-R-1-F MSD ^20), (180-127915-R-1-D PDS ^20) and (180-127915-R-1-D SD ^100). Elevated reporting limits (RLs) are provided.

Method 6020A: The continuing calibration blank (CCB) associated with batch 180-375723 recovered above the upper control limit for nickel. The samples associated with this CCB were non-detects -or- less than the RL for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCB 180-375723/93), (180-127915-R-1-D), (180-127915-R-1-E MS), (180-127915-R-1-D PDS) and (180-127915-R-1-D SD ^5).

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

RAD

Methods 903.0, 9315: Radium 226 batch 530435

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-3D (180-127924-1), WAP-7S (180-127924-2), WAP-7D (180-127924-3), (LCS 160-530435/1-A), (LCSD 160-530435/2-A) and (MB 160-530435/22-A)

Methods 904.0, 9320: Radium 228 batch 530438

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-3D (180-127924-1), WAP-7S (180-127924-2), WAP-7D (180-127924-3), (LCS 160-530438/1-A), (LCSD 160-530438/2-A) and (MB 160-530438/22-A)

Method PrecSep 0: Radium-228 Prep Batch 160-530438

The following samples were prepared at a reduced aliquot due to Matrix: WAP-3D (180-127924-1), WAP-7S (180-127924-2) and WAP-7D (180-127924-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-530435

The following samples were prepared at a reduced aliquot due to Matrix: WAP-3D (180-127924-1), WAP-7S (180-127924-2) and WAP-7D (180-127924-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample

Eurofins TestAmerica, Pittsburgh 11/4/2021 (Rev. 1)

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Job ID: 180-127924-1

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-127924-1

Job ID: 180-127924-1 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

duplicate (DUP) to demonstrate batch precision.

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

General Chemistry

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

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-127924-1

Project/Site: CCR Groundwater Monitoring

Qualifiers

HPLC/IC

Qualifier **Qualifier Description**

F1 MS and/or MSD recovery exceeds control 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 TestAmerica, Pittsburgh

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Laboratory: Eurofins TestAmerica, 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	06-27-21 *
California	State	2891	04-30-22
Connecticut	State	PH-0688	09-30-22
Florida	NELAP	E871008	06-30-22
Georgia	State	PA 02-00416	10-26-21
Illinois	NELAP	004375	10-26-21
Kansas	NELAP	E-10350	10-26-21
Kentucky (UST)	State	162013	04-30-22
Kentucky (WW)	State	KY98043	12-31-21
Louisiana	NELAP	04041	06-30-22
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	10-26-21
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	04-05-22
New Jersey	NELAP	PA005	10-26-21
New York	NELAP	11182	10-26-21
North Carolina (WW/SW)	State	434	12-31-21
North Dakota	State	R-227	04-30-22
Oregon	NELAP	PA-2151	02-06-22
Pennsylvania	NELAP	02-00416	10-26-21
Rhode Island	State	LAO00362	12-31-21
South Carolina	State	89014	04-30-22
Texas	NELAP	T104704528	10-26-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-22
Virginia	NELAP	10043	10-26-21
West Virginia DEP	State	142	10-26-21
Wisconsin	State	998027800	08-31-22

Laboratory: Eurofins TestAmerica, 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	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	06-30-21 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-21 *
Kentucky (DW)	State	KY90125	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21

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

Eurofins TestAmerica, Pittsburgh

Job ID: 180-127924-1

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-127924-1

Laboratory: Eurofins TestAmerica, 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	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-21
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-22
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	03-01-22
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

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Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-127924-1	WAP-3D	Water	09/30/21 08:05	10/01/21 10:15
180-127924-2	WAP-7S	Water	09/30/21 08:56	10/01/21 10:15
180-127924-3	WAP-7D	Water	09/30/21 09:30	10/01/21 10:15

Job ID: 180-127924-1

Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
EPA 9040C	рН	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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.

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

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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

Job ID: 180-127924-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-3D Lab Sample ID: 180-127924-1 Date Collected: 09/30/21 08:05

Matrix: Water

Job ID: 180-127924-1

Date Received: 10/01/21 10:15

Duna Taura	Batch	Batch Motional	Dun	Dil	Initial	Final	Batch	Prepared	Amalust	l ala
Prep Type Total/NA	Analysis Instrumer	Method EPA 9056A at ID: CHIC2100A	Run	Factor 1	Amount	Amount	Number 373753	or Analyzed 10/02/21 13:56	JRB	TAL PIT
Total/NA	Analysis Instrumer	EPA 9056A at ID: CHIC2100A		5			373753	10/02/21 14:12	JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A at ID: NEMO		1	50 mL	50 mL	374972 375365	10/12/21 15:57 10/14/21 13:03		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	7470A EPA 7470A nt ID: HGY		1	25 mL	25 mL	374160 374321	10/06/21 06:17 10/06/21 16:13		TAL PIT TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: NOEQUIP		1			374096	10/05/21 14:11	MJH	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	374236	10/06/21 11:39	KMM	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep-21 9315 at ID: GFPCBLUE		1	749.46 mL	1.0 g	530435 534853	10/06/21 12:58 11/03/21 09:37		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep_0 9320 at ID: GFPCPROTE	AN	1	749.46 mL	1.0 g	530438 534290	10/06/21 13:35 10/29/21 17:03		TAL SL TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			535009	11/03/21 17:55	MLK	TAL SL

Client Sample ID: WAP-7S Lab Sample ID: 180-127924-2 Date Collected: 09/30/21 08:56 **Matrix: Water**

Date Received: 10/01/21 10:15

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			373879	10/04/21 11:24	JRB	TAL PIT
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		5			373879	10/04/21 11:42	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374972	10/12/21 15:57	MM1	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		10			375723	10/16/21 09:05	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374972	10/12/21 15:57	MM1	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			375365	10/14/21 13:08	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	374160	10/06/21 06:17	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			374321	10/06/21 16:14	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			374096	10/05/21 14:12	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C		1	100 mL	100 mL	374236	10/06/21 11:39	KMM	TAL PIT

Eurofins TestAmerica, Pittsburgh

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Job ID: 180-127924-1

Client Sample ID: WAP-7S

Date Collected: 09/30/21 08:56 Date Received: 10/01/21 10:15 Lab Sample ID: 180-127924-2

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	PrecSep-21			749.82 mL	1.0 g	530435	10/06/21 12:58	BMP	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			534853	11/03/21 09:37	FLC	TAL SL
Total/NA	Prep	PrecSep_0			749.82 mL	1.0 g	530438	10/06/21 13:35	BMP	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPROTEA	.N	1			534290	10/29/21 17:03	SCB	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			535009	11/03/21 17:55	MLK	TAL SL

Client Sample ID: WAP-7D Lab Sample ID: 180-127924-3

Date Collected: 09/30/21 09:30 Matrix: Water

Date Received: 10/01/21 10:15

	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: CHIC2100A		1			373753	10/02/21 14:28	JRB	TAL PIT
Total/NA	Analysis Instrumen	EPA 9056A at ID: CHIC2100A		10			373753	10/02/21 14:45	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374972	10/12/21 15:57	MM1	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		10			375723	10/16/21 09:09	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	374972	10/12/21 15:57	MM1	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: NEMO		1			375365	10/14/21 13:20	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	374160	10/06/21 06:17	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			374321	10/06/21 16:15	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			374096	10/05/21 14:17	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	50 mL	100 mL	374236	10/06/21 11:39	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			750.50 mL	1.0 g	530435	10/06/21 12:58	BMP	TAL SL
Total/NA	Analysis Instrumen	9315 it ID: GFPCBLUE		1		-	534853	11/03/21 09:37	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.50 mL	1.0 g	530438	10/06/21 13:35	BMP	TAL SL
Total/NA	Analysis Instrumen	9320 it ID: GFPCPROTEA	AN	1		-	534290	10/29/21 17:03	SCB	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			535009	11/03/21 17:55	MLK	TAL SL

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058 TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Eurofins TestAmerica, Pittsburgh

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Job ID: 180-127924-1

Analyst References:

Lab: TAL PIT

Batch Type: Prep

MM1 = Mary Beth Miller

RJR = Ron Rosenbaum

Batch Type: Analysis

JRB = James Burzio

KMM = Kendric Moore

MJH = Michael Houde

RJR = Ron Rosenbaum

RSK = Robert Kurtz

Lab: TAL SL

Batch Type: Prep

BMP = Bailey Pinette

Batch Type: Analysis

FLC = Fernando Cruz

MLK = Micha Korrinhizer

SCB = Sarah Bernsen

OD ID: 100 127024 1

Eurofins TestAmerica, Pittsburgh

Client Sample ID: WAP-3D

Date Collected: 09/30/21 08:05 Date Received: 10/01/21 10:15 Lab Sample ID: 180-127924-1

Matrix: Water

Job ID: 180-127924-1

Method: EPA 9056A - An	ions, Ion Chromatography							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42	1.0	0.71	mg/L			10/02/21 13:56	1
Fluoride	0.48	0.10	0.026	mg/L			10/02/21 13:56	1
Sulfate	190	5.0	3.8	mg/L			10/02/21 14:12	5

Method: EPA 6020A - I Analyte	,	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:57	10/14/21 13:03	
Arsenic	ND		0.0010	0.00031	mg/L		10/12/21 15:57	10/14/21 13:03	•
Barium	0.015		0.010	0.0016	mg/L		10/12/21 15:57	10/14/21 13:03	•
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:57	10/14/21 13:03	
Boron	5.1		0.080	0.039	mg/L		10/12/21 15:57	10/14/21 13:03	•
Cadmium	0.00026	J	0.0010	0.00022	mg/L		10/12/21 15:57	10/14/21 13:03	•
Calcium	120		0.50	0.13	mg/L		10/12/21 15:57	10/14/21 13:03	
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:57	10/14/21 13:03	•
Cobalt	0.00085		0.00050	0.00013	mg/L		10/12/21 15:57	10/14/21 13:03	•
Lead	0.00025	J	0.0010	0.00013	mg/L		10/12/21 15:57	10/14/21 13:03	
Lithium	0.078		0.0050	0.0034	mg/L		10/12/21 15:57	10/14/21 13:03	
Molybdenum	0.44		0.0050	0.00061	mg/L		10/12/21 15:57	10/14/21 13:03	•
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:57	10/14/21 13:03	
Thallium	0.00026	J	0.0010	0.00015	mg/L		10/12/21 15:57	10/14/21 13:03	•

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND	0.00020	0.00013	mg/L		10/06/21 06:17	10/06/21 16:13	1
General Chemistry								

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	570		10	10	mg/L			10/06/21 11:39	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0	HF	0.1	0.1	SU			10/05/21 14:11	1

Method: 9315 -	Radium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.213	U	0.153	0.154	1.00	0.222	pCi/L	10/06/21 12:58	11/03/21 09:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.0		40 - 110					10/06/21 12:58	11/03/21 09:37	1

Method: 9320 - I	Radium-228 (GFPC)								
Analyte	Posult	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analvzed	Dil Fac
Analyte	Result	Qualifier	(20+/-)	(20+/-)	KL .	IVIDC	Ullit	Prepareu	Allalyzeu	DII Fac
Radium-228	0.557	U	0.430	0.433	1.00	0.680	pCi/L	10/06/21 13:35	10/29/21 17:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.0		40 - 110					10/06/21 13:35	10/29/21 17:03	1
Y Carrier	74.0		40 - 110					10/06/21 13:35	10/29/21 17:03	1

Client: Haley & Aldrich, Inc.

Project/Site: CCR, Groundwater Monitor

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-3D

Date Collected: 09/30/21 08:05
Date Received: 10/01/21 10:15

Lab Sample ID: 180-127924-1

Matrix: Water

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

_			Count Uncert.	Total Uncert.					
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.770		0.456	0.460	5.00	0.680 pCi/L		11/03/21 17:55	1
226 + 228									

Client Sample ID: WAP-7S

Date Collected: 09/30/21 08:56 Date Received: 10/01/21 10:15 Lab Sample ID: 180-127924-2

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography Analyte Result Qualifier RL **MDL** Unit D Analyzed Dil Fac Prepared 0.71 mg/L **Chloride** 58 1.0 10/04/21 11:24 **Fluoride** 0.42 0.10 0.026 mg/L 10/04/21 11:24 1 5.0 10/04/21 11:42 5 **Sulfate** 270 F1 3.8 mg/L

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable Result Qualifier RL **MDL** Unit Prepared Dil Fac Analyte Analyzed 10/12/21 15:57 10/14/21 13:08 **Antimony** 0.00074 0.0020 0.00038 mg/L **Arsenic** 0.0050 0.0010 0.00031 mg/L 10/12/21 15:57 10/14/21 13:08 0.010 10/14/21 13:08 0.0016 ma/L 10/12/21 15:57 **Barium** 0.036 1 0.00018 mg/L Beryllium ND 0.0010 10/12/21 15:57 10/14/21 13:08 **Boron** 9.8 0.80 0.39 mg/L 10/12/21 15:57 10/16/21 09:05 10 Cadmium ND 0.0010 0.00022 mg/L 10/12/21 15:57 10/14/21 13:08 0.50 0.13 mg/L 10/12/21 15:57 10/14/21 13:08 **Calcium** 140 Chromium ND 0.0020 0.0015 mg/L 10/12/21 15:57 10/14/21 13:08 Cobalt 0.00019 J 0.00050 0.00013 mg/L 10/12/21 15:57 10/14/21 13:08 0.0010 0.00013 mg/L 10/14/21 13:08 Lead ND 10/12/21 15:57 0.0034 mg/L Lithium 0.12 0.0050 10/12/21 15:57 10/14/21 13:08 0.00061 mg/L 10/12/21 15:57 10/14/21 13:08 Molybdenum 0.0050 0.22 Selenium 0.0050 0.0015 mg/L 10/12/21 15:57 10/14/21 13:08 ND Thallium ND 0.0010 0.00015 mg/L 10/12/21 15:57 10/14/21 13:08

 Method: EPA 7470A - Mercury (CVAA)

 Analyte
 Result
 Qualifier
 RL
 MDL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Mercury
 ND
 0.00020
 0.00013
 mg/L
 10/06/21 06:17
 10/06/21 16:14
 1

General Chemistry Result Qualifier RL Analyte **MDL** Unit D Prepared Analyzed Dil Fac **Total Dissolved Solids** 630 10 10 mg/L 10/06/21 11:39 Analyte Result Qualifier RL RI Unit D Prepared Analyzed Dil Fac SU рН 8.4 HF 0.1 0.1 10/05/21 14:12

Method: 9315 - Radium-226 (GFPC) Count Total Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 0.211 U 0.156 0.157 1.00 0.231 pCi/L 10/06/21 12:58 11/03/21 09:37 Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 97.9 40 - 110 10/06/21 12:58 11/03/21 09:37

Eurofins TestAmerica, Pittsburgh

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-7S

Lab Sample ID: 180-127924-2

Matrix: Water

Job ID: 180-127924-1

Date Collected: 09/30/21 08:56 Date Received: 10/01/21 10:15

Method: 9320 -	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.304	U	0.387	0.388	1.00	0.642	pCi/L	10/06/21 13:35	10/29/21 17:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					10/06/21 13:35	10/29/21 17:03	1
Y Carrier	75.9		40 - 110					10/06/21 13:35	10/29/21 17:03	1

Method: Ra226_Ra2	228 - Com	bined Ra	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.515	U	0.417	0.419	5.00	0.642	pCi/L		11/03/21 17:55	1
+ 228										

Client Sample ID: WAP-7D

Date Collected: 09/30/21 09:30

Matrix: Water

Date Received: 10/01/21 10:15

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	180	1.0	0.71	mg/L			10/02/21 14:28	1
Fluoride	0.50	0.10	0.026	mg/L			10/02/21 14:28	1
Sulfate	1000	10	7.6	mg/L			10/02/21 14:45	10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		10/12/21 15:57	10/14/21 13:20	1
Arsenic	0.0010		0.0010	0.00031	mg/L		10/12/21 15:57	10/14/21 13:20	1
Barium	0.047		0.010	0.0016	mg/L		10/12/21 15:57	10/14/21 13:20	1
Beryllium	ND		0.0010	0.00018	mg/L		10/12/21 15:57	10/14/21 13:20	1
Boron	14		0.80	0.39	mg/L		10/12/21 15:57	10/16/21 09:09	10
Cadmium	ND		0.0010	0.00022	mg/L		10/12/21 15:57	10/14/21 13:20	1
Calcium	430		0.50	0.13	mg/L		10/12/21 15:57	10/14/21 13:20	1
Chromium	ND		0.0020	0.0015	mg/L		10/12/21 15:57	10/14/21 13:20	1
Cobalt	0.0065		0.00050	0.00013	mg/L		10/12/21 15:57	10/14/21 13:20	1
Lead	0.00022	J	0.0010	0.00013	mg/L		10/12/21 15:57	10/14/21 13:20	1
Lithium	0.063		0.0050	0.0034	mg/L		10/12/21 15:57	10/14/21 13:20	1
Molybdenum	0.34		0.0050	0.00061	mg/L		10/12/21 15:57	10/14/21 13:20	1
Selenium	ND		0.0050	0.0015	mg/L		10/12/21 15:57	10/14/21 13:20	1
Thallium	ND		0.0010	0.00015	mg/L		10/12/21 15:57	10/14/21 13:20	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		10/06/21 06:17	10/06/21 16:15	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2100		20	20	mg/L			10/06/21 11:39	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.6	HE	0.1	0.1	SU			10/05/21 14:17	

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-127924-1

Project/Site: CCR Groundwater Monitoring

Client Sample ID: WAP-7D Lab Sample ID: 180-127924-3 Date Collected: 09/30/21 09:30

Matrix: Water

Date Received: 10/01/21 10:15

Method: 9315 - Ra	adium-226 (GFPC)								
	·	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.627		0.199	0.207	1.00	0.199	pCi/L	10/06/21 12:58	11/03/21 09:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110					10/06/21 12:58	11/03/21 09:37	1

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.540	U	0.386	0.389	1.00	0.603	pCi/L	10/06/21 13:35	10/29/21 17:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.9		40 - 110					10/06/21 13:35	10/29/21 17:03	1
Y Carrier	77.8		40 - 110					10/06/21 13:35	10/29/21 17:03	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.17		0.434	0.441	5.00	0.603	pCi/L		11/03/21 17:55	1

Job ID: 180-127924-1

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-373753/7

Matrix: Water

Analysis Batch: 373753

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

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Chloride ND 1.0 0.71 mg/L 10/02/21 09:20 Fluoride ND 0.10 0.026 mg/L 10/02/21 09:20 Sulfate ND 1.0 0.76 mg/L 10/02/21 09:20

Lab Sample ID: LCS 180-373753/6

Matrix: Water

Analysis Batch: 373753

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	52.8		mg/L		106	80 - 120	
Fluoride	2.50	2.84		mg/L		114	80 - 120	
Sulfate	50.0	53.6		mg/L		107	80 - 120	

Lab Sample ID: MB 180-373879/7

Matrix: Water

Analysis Batch: 373879

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

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Client Sample ID: WAP-7S

Client Sample ID: WAP-7S

Prep Type: Total/NA

	MB M	IB						
Analyte	Result Q	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND ND	1.0	0.71	mg/L			10/04/21 10:39	1
Fluoride	ND	0.10	0.026	mg/L			10/04/21 10:39	1
Sulfate	ND	1.0	0.76	mg/L			10/04/21 10:39	1

Lab Sample ID: LCS 180-373879/6

Matrix: Water

Analysis Batch: 373879

	Spike	LCS	LCS			%Rec.	
Analyte	Added	Result	Qualifier	Unit D	%Rec	Limits	
Chloride	50.0	50.4		mg/L	101	80 - 120	
Fluoride	2.50	2.46		mg/L	98	80 - 120	
Sulfate	50.0	49.3		mg/L	99	80 - 120	

Lab Sample ID: 180-127924-2 MS

Matrix: Water									Prep Type: Total/NA
Analysis Batch: 373879									
-	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits

Chloride 59 250 298 mg/L 96 80 - 120 Fluoride 12.5 0.38 J 13.1 mg/L 102 80 - 120 Sulfate 270 F1 250 448 F1 mg/L 80 - 120 73

Lab Sample ID: 180-127924-2 MSD

Matrix: Water

Analysis Batch: 373879

Alialysis Datell. 373073											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	59		250	286		mg/L		91	80 - 120	4	15
Fluoride	0.38	J	12.5	12.5		mg/L		97	80 - 120	5	15
Sulfate	270	F1	250	430	F1	mg/L		66	80 - 120	4	15

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Project/Site: CCR Groundwater Monitoring

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

Lab Sample ID: MB 180-374972/1-A

Matrix: Water

Analysis Batch: 375365

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 374972

Job ID: 180-127924-1

MB MB Analyzed Dil Fac Result Qualifier RL **MDL** Unit D Prepared **Analyte** Antimony ND 0.0020 0.00038 mg/L 10/12/21 15:57 10/14/21 12:40 Arsenic ND 0.0010 0.00031 mg/L 10/12/21 15:57 10/14/21 12:40 ND 10/12/21 15:57 10/14/21 12:40 Barium 0.010 0.0016 mg/L 0.0010 0.00018 mg/L 10/12/21 15:57 10/14/21 12:40 Beryllium ND Boron ND 0.080 0.039 mg/L 10/12/21 15:57 10/14/21 12:40 Cadmium ND 0.0010 0.00022 mg/L 10/12/21 15:57 10/14/21 12:40 Calcium ND 0.50 0.13 mg/L 10/12/21 15:57 10/14/21 12:40 Chromium ND 0.0020 0.0015 mg/L 10/12/21 15:57 10/14/21 12:40 10/12/21 15:57 10/14/21 12:40 Cobalt ND 0.00050 0.00013 mg/L Lead ND 0.0010 0.00013 mg/L 10/12/21 15:57 10/14/21 12:40 10/12/21 15:57 10/14/21 12:40 Lithium ND 0.0050 0.0034 mg/L Molybdenum ND 0.0050 0.00061 mg/L 10/12/21 15:57 10/14/21 12:40 Selenium ND 0.0050 0.0015 mg/L 10/12/21 15:57 10/14/21 12:40 Thallium ND 0.0010 0.00015 mg/L 10/12/21 15:57 10/14/21 12:40

Lab Sample ID: LCS 180-374972/2-A

Matrix: Water

Analysis Batch: 375365

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

Prep Batch: 374972

Analysis Batch. 37 3303	Spike	LCS	LCS				%Rec.
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
Antimony	0.250	0.231		mg/L		93	80 - 120
Arsenic	1.00	0.869		mg/L		87	80 - 120
Barium	1.00	0.832		mg/L		83	80 - 120
Beryllium	0.500	0.420		mg/L		84	80 - 120
Boron	1.25	1.20		mg/L		96	80 - 120
Cadmium	0.500	0.426		mg/L		85	80 - 120
Calcium	25.0	26.0		mg/L		104	80 - 120
Chromium	0.500	0.413		mg/L		83	80 - 120
Cobalt	0.500	0.406		mg/L		81	80 - 120
Lead	0.500	0.411		mg/L		82	80 - 120
Lithium	0.500	0.417		mg/L		83	80 - 120
Molybdenum	0.500	0.430		mg/L		86	80 - 120
Selenium	1.00	0.861		mg/L		86	80 - 120
Thallium	1.00	0.850		mg/L		85	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-374160/1-A

Matrix: Water

Analysis Batch: 374321

MB MB

Analyte Result Qualifier
Mercury ND

Prep Type: Total/NA Prep Batch: 374160

Prepared Analyzed Dil Fac 10/06/21 06:17 10/06/21 15:55

Client Sample ID: Method Blank

Eurofins TestAmerica, Pittsburgh

RL

0.00020

MDL Unit

0.00013 mg/L

2

3

4

6

8

10

12

Project/Site: CCR Groundwater Monitoring

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

Lab Sample ID: LCS 180-374160/2-A

Matrix: Water

Analysis Batch: 374321

Spike Analyte Mercury

Added 0.00250

LCS LCS Result Qualifier 0.00227

Unit mg/L

%Rec 91 80 - 120

Prep Type: Total/NA

Prep Batch: 374160

Prep Type: Total/NA

%Rec. Limits

Client Sample ID: Lab Control Sample

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-374096/1

Matrix: Water

Analysis Batch: 374096

Analyte pН

Spike Added 7.00

LCS LCS Result Qualifier 7.0

Unit SU

D %Rec 100 Limits 99 - 101

Client Sample ID: Method Blank

%Rec.

Client Sample ID: Lab Control Sample

10

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

Lab Sample ID: MB 180-374236/2

Matrix: Water

Analysis Batch: 374236

MB MB

Result Qualifier Analyte Total Dissolved Solids ND

RL MDL Unit 10 10 mg/L Prepared

Dil Fac Analyzed 10/06/21 11:39

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 530435

Prep Type: Total/NA

Lab Sample ID: LCS 180-374236/1

Matrix: Water

Analysis Batch: 374236

Analyte Total Dissolved Solids

Spike Added 422

LCS LCS Result Qualifier 406

Unit mg/L D %Rec

96

%Rec. Limits

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

80 - 120

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-530435/22-A

Matrix: Water

Analysis Batch: 534853

Total Uncert.

 $(2\sigma + / -)$ RL 0.118 1.00

MDC Unit 0.245 pCi/L Prepared

Analyzed 10/06/21 12:58 11/03/21 09:38 Dil Fac

Carrier

Radium-226

Analyte

85.5

Ba Carrier

Qualifier %Yield

MR MR

-0.02510

MΒ MB

Result Qualifier

Ū

Limits 40 - 110

12.78

Count

Uncert.

 $(2\sigma + / -)$

0.118

Prepared 10/06/21 12:58 11/03/21 09:38

Analyzed

Client Sample ID: Lab Control Sample

Dil Fac

Lab Sample ID: LCS 160-530435/1-A

Matrix: Water

Analysis Batch: 534853

Spike Added Analyte Radium-226 15.1

LCS LCS Result Qual

Uncert. $(2\sigma + / -)$ 1.40

Total

RL **MDC** Unit 1.00

0.218 pCi/L

%Rec 85

Prep Batch: 530435 %Rec. Limits

Prep Type: Total/NA

Eurofins TestAmerica, Pittsburgh

75 - 125

Total

Uncert.

 $(2\sigma + / -)$

1.54

RL

1.00

Total

Uncert.

 $(2\sigma + / -)$

1.40

RL

1.00

MDC Unit

0.571 pCi/L

MDC Unit

0.248 pCi/L

Job ID: 180-127924-1

Prep Type: Total/NA

Prep Batch: 530435

Prep Type: Total/NA

Prep Batch: 530435

RER

0.47

Prep Type: Total/NA

Prep Batch: 530438

Analyzed

Analyzed

10/29/21 17:04

Prep Type: Total/NA Prep Batch: 530438

%Rec.

Limits

Client Sample ID: Method Blank

10/06/21 13:35 10/29/21 17:04

10/06/21 13:35 10/29/21 17:04

Client Sample ID: Lab Control Sample

%Rec.

Limits

75 - 125

75 - 125

RER

Limit

Dil Fac

10

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

%Rec

Prepared

Prepared

10/06/21 13:35

%Rec

95

Client Sample ID: Lab Control Sample Dup

94

Project/Site: CCR Groundwater Monitoring

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-530435/1-A

Matrix: Water

Analysis Batch: 534853

LCS LCS

Carrier **%Yield Qualifier** Limits Ba Carrier 96.9 40 - 110

Lab Sample ID: LCSD 160-530435/2-A

Analyte

Analysis Batch: 534853

Matrix: Water

LCSD LCSD **Spike**

Added

Result Qual

14.17

Radium-226 15.1 LCSD LCSD

Carrier %Yield Qualifier Limits Ba Carrier 90.7 40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-530438/22-A

Matrix: Water

Analysis Batch: 534290

Count Total

MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ Radium-228 0.05138 0.323 0.323

MΒ ΜB Carrier %Yield Qualifier Limits Ba Carrier 85.5 40 - 110

Y Carrier 90.8 40 - 110

Lab Sample ID: LCS 160-530438/1-A

Matrix: Water

Analyte

Analysis Batch: 534292

Radium-228 12.3 LCS LCS

%Yield Qualifier Carrier I imits 40 - 110 Ba Carrier 96.9 Y Carrier 81.1 40 - 110

Lab Sample ID: LCSD 160-530438/2-A

Matrix: Water

Analysis Batch: 534292

Total Spike LCSD LCSD Uncert. Added Result Qual

Spike

Added

LCS LCS

Result Qual

11.59

Analyte Radium-228 12.3 13 24

 $(2\sigma + / -)$ 1.79

RL 1.00

RL

1.00

MDC Unit 1.11 pCi/L

MDC Unit

0.516 pCi/L

%Rec 108

%Rec. Limits RER

RER Limit 75 - 125 0.52

Prep Type: Total/NA

Prep Batch: 530438

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-127924-1

Project/Site: CCR Groundwater Monitoring

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

Lab Sample ID: LCSD 160-530438/2-A **Matrix: Water**

Analysis Batch: 534292

LCSD LCSD

Carrier	%Yield	Qualifier	Limits
Ba Carrier	90.7		40 - 110
Y Carrier	53.8		40 - 110

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 530438

QC Association Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

HPLC/IC

Analysis Batch: 373753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	EPA 9056A	
180-127924-1	WAP-3D	Total/NA	Water	EPA 9056A	
180-127924-3	WAP-7D	Total/NA	Water	EPA 9056A	
180-127924-3	WAP-7D	Total/NA	Water	EPA 9056A	
MB 180-373753/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-373753/6	Lab Control Sample	Total/NA	Water	EPA 9056A	

Analysis Batch: 373879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-2	WAP-7S	Total/NA	Water	EPA 9056A	
180-127924-2	WAP-7S	Total/NA	Water	EPA 9056A	
MB 180-373879/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-373879/6	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-127924-2 MS	WAP-7S	Total/NA	Water	EPA 9056A	
180-127924-2 MSD	WAP-7S	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 374160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	7470A	
180-127924-2	WAP-7S	Total/NA	Water	7470A	
180-127924-3	WAP-7D	Total/NA	Water	7470A	
MB 180-374160/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-374160/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 374321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	EPA 7470A	374160
180-127924-2	WAP-7S	Total/NA	Water	EPA 7470A	374160
180-127924-3	WAP-7D	Total/NA	Water	EPA 7470A	374160
MB 180-374160/1-A	Method Blank	Total/NA	Water	EPA 7470A	374160
LCS 180-374160/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	374160

Prep Batch: 374972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total Recoverable	Water	3005A	
180-127924-2	WAP-7S	Total Recoverable	Water	3005A	
180-127924-3	WAP-7D	Total Recoverable	Water	3005A	
MB 180-374972/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-374972/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 375365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total Recoverable	Water	EPA 6020A	374972
180-127924-2	WAP-7S	Total Recoverable	Water	EPA 6020A	374972
180-127924-3	WAP-7D	Total Recoverable	Water	EPA 6020A	374972
MB 180-374972/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	374972
LCS 180-374972/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	374972

Eurofins TestAmerica, Pittsburgh

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Job ID: 180-127924-1

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QC Association Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring

Metals

Analysis Batch: 375723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-2	WAP-7S	Total Recoverable	Water	EPA 6020A	374972
180-127924-3	WAP-7D	Total Recoverable	Water	EPA 6020A	374972

General Chemistry

Analysis Batch: 374096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	EPA 9040C	
180-127924-2	WAP-7S	Total/NA	Water	EPA 9040C	
180-127924-3	WAP-7D	Total/NA	Water	EPA 9040C	
LCS 180-374096/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 374236

Lab Sample ID 180-127924-1	Client Sample ID WAP-3D	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
180-127924-2	WAP-7S	Total/NA	Water	SM 2540C	
180-127924-3	WAP-7D	Total/NA	Water	SM 2540C	
MB 180-374236/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-374236/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 530435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	PrecSep-21	·
180-127924-2	WAP-7S	Total/NA	Water	PrecSep-21	
180-127924-3	WAP-7D	Total/NA	Water	PrecSep-21	
MB 160-530435/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-530435/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-530435/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 530438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-127924-1	WAP-3D	Total/NA	Water	PrecSep_0	
180-127924-2	WAP-7S	Total/NA	Water	PrecSep_0	
180-127924-3	WAP-7D	Total/NA	Water	PrecSep_0	
MB 160-530438/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-530438/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-530438/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep 0	

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2

Job ID: 180-127924-1

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Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Chain of Custody Record

💸 eurofins

Environment Testing America

Phone: 412-963-7058 Fax: 412-963-2468																
Client Information	Sampler: 5c	n /	471	Lat Ha	PM: ayes, Ke	en					Carrier	Tracking I	No(s):		COC No: 180-74384-1406	8.2
Client Contact: Mark Breting	Phone: 317- 4	173-	1325	E-N	Mail: en.Haye	es@E	urofin	nset.c	com		State of	Origin:	IN		Page: Page 2 of 2	
Company: Atlas Technical Consultants LLC			PWSID:						Aı	nalysis F	Requeste	ed			Job #:	
Address: 7988 Centerpoint Drive Suite 100	Due Date Reques	ted:				,									Preservation Cod	
City: Indianapolis	TAT Requested (d	lays):			Ш										A - HCL B - NaOH C - Zn Acetate	M - Hexane N - None O - AsNaO2
State, Zip: IN, 46256	Compliance Proje	ct: A Yes	Δ No		-111										D - Nitric Acid E - NaHSO4 F - MeOH	P - Na2O4S Q - Na2SO3 R - Na2S2O3
Phone: 864-214-8750(Tel)	PO#: FB-242026. AB	-241410			0		1							7.	G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrate
Email: mark.breting@atcassociates.com	WO #:			-	or No	<u>(6)</u>								2	I - Ice	U - Acetone V - MCAA
Project Name: Vectren Culley West	Project #: 18016014				ole (Yes	SECTION 28D			a228					containers	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)
Site:	SSOW#:				Samp	PRGE		20	20 R					oj jo		
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, S=solid, O=waste/oll, BT=Tissue, A=A	eld Filtered	POTOL MOSTAINS (NESSON	6020A, 7470A	2540C_Calcd - TDS	9315_Ra226, 9320_Ra228					Total Number	Special In:	structions/Note:
		$\geq \leq$	Preservat	tion Code:	\square	N	D	N	D					\nearrow		
WAP-3D	9.30.21	805	G	W			4	1	1							
WAP- 75	1	856		1												
WAP- 3D WAP- 7S WAP- 7D	V	930	Ψ	18	#	+	V 1	1/1	10			+				
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					++	+	+				180-1	27924	Chain of	Custo	dy	
					#	t	+				- 1 1	\top	$\neg \Box$	1		-
Possible Hazard Identification Non-Hazard Flammable Skin Irritant Po	oison B Unkn	own \square_f	Radiological		s		le Dis Returi				be assesse Disposa	ed if sai I By Lab	mples are	_	ned longer than 1	month) Months
Deliverable Requested: I, II, III, IV, Other (specify)					s					C Require						
Empty Kit Relinquished by:		Date:			Time	e:					М	ethod of S	Shipment:			
Relinquished by: Lill @	Date/Time: 9.3	0.21/1	15 30		te		ceived	\angle	/				Date/Time:	(21	1015	Company
Relinquished by:	Date/Time:	•	ľ	Company		Re	ceived						Date/Time:			Company
Relinquished by:	Date/Time:			Company		Re	ceived	by:					Date/Time:			Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Co	oler Te	mpera	ature(s	°C and Oth	er Remarks:					

Job Number: 180-127924-1

Login Number: 127924

List Source: Eurofins TestAmerica, 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)	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	

Job Number: 180-127924-1

Login Number: 127924

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 2

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)	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	

Job Number: 180-127924-1

Login Number: 127924 List Number: 3

List Source: Eurofins TestAmerica, St. Louis List Creation: 10/05/21 03:37 PM

Creator: Mazariegos, Leonel A

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.	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	

Environment Testing America

ANALYTICAL REPORT

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-129535-1

Client Project/Site: CCR Groundwater Monitoring FB Culley

For:

Haley & Aldrich, Inc. 465 Medford St Suite 2200 Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Kuntll Haye

Authorized for release by: 1/7/2022 5:12:05 PM

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@Eurofinset.com

-----LINKS

Review your project results through

Total Access

Have a Question?



Visit us at: www.eurofinsus.com/Env This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Project/Site: CCR Groundwater Monitoring FB Culley

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Job ID: 180-129535-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative 180-129535-1

Comments

No additional comments.

Receipt

The samples were received on 11/4/2021 2:15 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 2.0° C, 2.4° C, 2.4° C, 2.4° C and 3.4° C.

GC Semi VOA

Method 9056A: Analyst error the wrong sample was used or the sample vial was placed in the wrong position on the auto-sampler in the initial reported results. Re-analysis confirms the duplication results in sample number 129535-17. These out of holding time values are the correct results for this sample.: WAP-5S (180-129535-4)

Method 9056A: Re-analysis confirms the duplication results in sample number 129535-17. These out of holding time results for this sample 129535-17 are very similar to the actual initial results. This is a good confirmation of the initial results. DUP-1 (180-129535-17)

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

RAD

Method 9315: Radium 226 batch 535772

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-4S (180-129535-1), WAP-4I (180-129535-2), WAP-4D (180-129535-3), WAP-5S (180-129535-4), WAP-5I (180-129535-5), WAP-5D (180-129535-6), WAP-6S (180-129535-7), WAP-6S (180-129535-7[DU]), WAP-6I (180-129535-8), WAP-6D (180-129535-9), WAP-8S (180-129535-10), WAP-8I (180-129535-11), WAP-8D (180-129535-12), WAP-9S (180-129535-13), WAP-9I (180-129535-14), WAP-9D (180-129535-15), FB-1 (180-129535-16), DUP-1 (180-129535-17), DUP-2 (180-129535-18), WAP-3S (180-129535-19), WAP-3D (180-129535-20), (LCS 160-535772/1-A) and (MB 160-535772/23-A)

Method 9320: Radium 226 batch 542176

The detection goal was not met. Sample was prepped at a reduced aliquot due to the presence of matrix interferences: WAP-9S (180-129535-13). Analytical results are reported with the detection limit achieved.

Method 9320: Radium 226 batch 542176

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-4S (180-129535-1), WAP-4I (180-129535-2), WAP-4D (180-129535-3), WAP-5S (180-129535-4), WAP-5I (180-129535-5), WAP-5D (180-129535-6), WAP-6S (180-129535-7), WAP-6I (180-129535-8), WAP-6D (180-129535-9), WAP-8S (180-129535-10), WAP-8I (180-129535-11), WAP-8D (180-129535-12), WAP-9S (180-129535-13), WAP-9I (180-129535-14), WAP-9D (180-129535-15), FB-1 (180-129535-16), DUP-1 (180-129535-17), DUP-2 (180-129535-18), WAP-3S (180-129535-19), WAP-3D (180-129535-20), (LCS 160-542176/1-A), (LCSD 160-542176/2-A) and (MB 160-542176/23-A)

Method PrecSep 0: Radium-228 Prep Batch 160-542176

The following samples were prepared at a reduced aliquot due to Matrix: WAP-4S (180-129535-1), WAP-4I (180-129535-2), WAP-4D (180-129535-3), WAP-5I (180-129535-5), WAP-6S (180-129535-7), WAP-6I (180-129535-8), WAP-6D (180-129535-9), WAP-8I (180-129535-11), WAP-8D (180-129535-12), WAP-9S (180-129535-13), WAP-9I (180-129535-14), WAP-9D (180-129535-15) and FB-1 (180-129535-16). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep_0: Radium-228 Prep Batch 160-540407

The Ra226/228 methods can be run sequentially and separated during the process, which enables us to use 1L to run them together. Unfortunately, the 228 portion resulted in a high MB result, indicating some sort of potential beta emitting contamination. Since the results

Eurofins Pittsburgh 1/7/2022

Job ID: 180-129535-1

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Job ID: 180-129535-1 (Continued)

Laboratory: Eurofins Pittsburgh (Continued)

were not U flagged, the samples required reanalysis. The Ra226 portion was run successfully, with no indication of contamination, as it is an alpha emitter, and was therefore reported.

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 manganese associated with batch 180-378827 was outside of control limits. The associated sample is: WAP-6S (180-129535-7).

Method 6020A: The following samples were diluted for boron due to the nature of the sample matrix: WAP-8S (180-129535-10), DUP-1 (180-129535-17), DUP-2 (180-129535-18), WAP-3S (180-129535-19) and WAP-3D (180-129535-20). Elevated reporting limits (RLs) are provided.

Method 6020A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 180-378429 and analytical batch 180-378981 were below the control limits for boron. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Methods 6020A, 6020B: The cobalt concentrations found in the bracketing continuing calibration blanks (CCB) were greater than the reporting limit. The associated samples bracketed by this CCB had cobalt concentrations below the reporting limit (RL) for cobalt. Results are reported as is with the addition of this narrative for samples: WAP-4D (180-129535-3), WAP-5I (180-129535-5) and WAP-5D (180-129535-6)

Method 6020A: The post digestion spike % recovery for Boron associated with batch 180-378981 was below the control limits for boron. The associated sample is: WAP-6S (180-129535-7).

Method 6020A: The Antimony and Thallium concentrations found in the bracketing continuing calibration blanks (CCB) were greater than the reporting limit. The associated samples bracketed by this CCB had Antimony and Thallium concentrations below the reporting limit (RL) for Antimony and Thallium. Results are reported as is with the addition of this narrative for samples: WAP-4S (180-129535-1), WAP-4I (180-129535-2), WAP-4D (180-129535-3), WAP-5S (180-129535-4), WAP-5I (180-129535-5) and WAP-5D (180-129535-6)

Method 6020A: The following sample was diluted to bring the concentration of target analytes within the calibration range: WAP-4S (180-129535-1). Elevated reporting limits (RLs) are provided.

Method 6020A: The following samples were diluted to bring the concentration of target analytes within the calibration range: (180-129538-E-1-B ^10), (180-129538-E-1-C MS ^10), (180-129538-E-1-D MSD ^10), (180-129538-E-1-B PDS ^10) and (180-129538-E-1-B SD ^50). Elevated reporting limits (RLs) are provided.

Method 6020A: The following sample was diluted due to the nature of the sample matrix: WAP-5S (180-129535-4). Elevated reporting limits (RLs) are provided.

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

General Chemistry

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

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Job ID: 180-129535-1

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Qualifiers

Qualifier **Qualifier Description** $\overline{\mathsf{H}}$ Sample was prepped or analyzed beyond the specified holding time

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

Metals

F1

Qualifier **Qualifier Description** ^2

Calibration Blank (ICB and/or CCB) is outside acceptance limits. 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

Qualifier Description Qualifier

G The Sample MDC is greater than the requested RL.

U Result is less than the sample detection limit.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery **CFL** Contains Free Liquid CFU Colony Forming Unit **CNF** Contains No Free Liquid

DFR Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

Detection Limit (DoD/DOE) DΙ

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)

MDI Method Detection Limit Minimum Level (Dioxin) ML 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

Practical Quantitation Limit PQL

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) **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 FB Culley

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	12-21-21
California	State	2891	04-30-22
Connecticut	State	PH-0688	09-30-22
Florida	NELAP	E871008	12-21-21
Georgia	State	PA 02-00416	12-21-21
Illinois	NELAP	004375	12-21-21
Kansas	NELAP	E-10350	12-21-21
Kentucky (UST)	State	162013	04-30-22
Kentucky (WW)	State	KY98043	12-31-21
Louisiana	NELAP	04041	12-21-21
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-21-21
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	04-05-22
New Jersey	NELAP	PA005	12-21-21
New York	NELAP	11182	12-21-21
North Carolina (WW/SW)	State	434	12-21-21
North Dakota	State	R-227	12-21-21
Oregon	NELAP	PA-2151	12-21-21
Pennsylvania	NELAP	02-00416	12-21-21
Rhode Island	State	LAO00362	12-31-21
South Carolina	State	89014	12-21-21
Texas	NELAP	T104704528	12-21-21
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	12-21-21
Virginia	NELAP	10043	12-21-21
West Virginia DEP	State	142	12-21-21
Wisconsin	State	998027800	12-19-21

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	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	06-30-21 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21

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

Eurofins Pittsburgh

Job ID: 180-129535-1

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

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	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-21
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	12-27-21
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-22
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	03-01-22
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

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Job ID: 180-129535-1

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Sample Summary

Client: Haley & Aldrich, Inc.

180-129535-20

WAP-3D

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-129535-1	WAP-4S	Water	11/02/21 07:47	11/04/21 14:15
180-129535-2	WAP-4I	Water	11/02/21 08:22	11/04/21 14:15
180-129535-3	WAP-4D	Water	11/02/21 09:00	11/04/21 14:15
180-129535-4	WAP-5S	Water	11/01/21 13:55	11/04/21 14:15
180-129535-5	WAP-5I	Water	11/01/21 14:53	11/04/21 14:15
180-129535-6	WAP-5D	Water	11/01/21 15:52	11/04/21 14:15
180-129535-7	WAP-6S	Water	11/02/21 12:29	11/04/21 14:15
180-129535-8	WAP-6I	Water	11/02/21 13:04	11/04/21 14:15
180-129535-9	WAP-6D	Water	11/02/21 15:42	11/04/21 14:15
180-129535-10	WAP-8S	Water	11/02/21 09:52	11/04/21 14:15
180-129535-11	WAP-8I	Water	11/02/21 10:34	11/04/21 14:15
180-129535-12	WAP-8D	Water	11/02/21 11:30	11/04/21 14:15
180-129535-13	WAP-9S	Water	11/02/21 15:42	11/04/21 14:15
180-129535-14	WAP-9I	Water	11/03/21 07:50	11/04/21 14:15
180-129535-15	WAP-9D	Water	11/03/21 08:30	11/04/21 14:15
180-129535-16	FB-1	Water	11/01/21 14:12	11/04/21 14:15
180-129535-17	DUP-1	Water	11/01/21 00:00	11/04/21 14:15
180-129535-18	DUP-2	Water	11/02/21 00:00	11/04/21 14:15
180-129535-19	WAP-3S	Water	11/03/21 09:12	11/04/21 14:15

Water

11/03/21 09:54 11/04/21 14:15

Job ID: 180-129535-1

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Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

l lethod	Method Description	Protocol	Laboratory
PA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
EPA 9040C	рН	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
8005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
'470A	Preparation, Mercury	SW846	TAL PIT
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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.

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

Laboratory References:

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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

Eurofins Pittsburgh

1/7/2022

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Job ID: 180-129535-1

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Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-4S

Date Collected: 11/02/21 07:47 Date Received: 11/04/21 14:15

Lab Sample ID: 180-129535-1

Matrix: Water

Batch Batch Dil Initial Batch Final **Prepared** Method **Factor** or Analyzed **Prep Type** Type Run **Amount** Amount Number **Analyst** Lab Total/NA Analysis EPA 9056A 377720 11/05/21 09:56 JRB TAL PIT Instrument ID: INTEGRION Total/NA Analysis **EPA 9056A** 10 377720 11/05/21 10:14 JRB TAL PIT Instrument ID: INTEGRION Total Recoverable Prep 3005A 50 mL 50 mL 378431 11/12/21 11:00 RGM TAL PIT Total Recoverable Analysis EPA 6020A 1 378981 11/13/21 22:09 RJR TAL PIT Instrument ID: A 3005A Total Recoverable Prep 50 mL 50 mL 378431 11/12/21 11:00 RGM TAL PIT Total Recoverable Analysis **EPA 6020A** 10 379323 11/17/21 13:52 RSK TAL PIT Instrument ID: A Total/NA Prep 7470A 25 mL 25 mL 378159 TAL PIT 11/09/21 06:20 RJR Total/NA Analysis **EPA 7470A** 1 378967 11/15/21 12:22 RJR TAL PIT Instrument ID: HGY TAL PIT Total/NA Analysis **EPA 9040C** 1 377902 11/06/21 09:54 MJH Instrument ID: NOEQUIP TAL PIT Total/NA Analysis SM 2540C 100 mL 100 mL 377880 11/05/21 17:30 KMM Instrument ID: NOEQUIP Total/NA Prep PrecSep-21 995.91 mL 11/09/21 16:45 LPS TAL SL 1.0 g 535772 Total/NA Analysis 9315 540334 12/05/21 20:18 FLC TAL SL 1 Instrument ID: GFPCBLUE PrecSep_0 Total/NA Prep 749.75 mL 12/15/21 10:20 BMP TAL SL 1.0 g 542176 Total/NA Analysis 9320 543041 12/20/21 14:04 MLK TAL SL Instrument ID: GFPCBLUE Total/NA Analysis Ra226 Ra228 543272 12/21/21 17:31 EMH TAL SL

Client Sample ID: WAP-4I Lab Sample ID: 180-129535-2 Date Collected: 11/02/21 08:22 **Matrix: Water**

Date Received: 11/04/21 14:15

Instrument ID: NOEQUIP

	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			377720	11/05/21 10:32	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			378981	11/13/21 22:24	RJR	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			379323	11/17/21 13:56	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			378967	11/15/21 12:23	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			377902	11/06/21 09:56	MJH	TAL PIT

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Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-4I

Date Collected: 11/02/21 08:22 Date Received: 11/04/21 14:15

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Method Factor **Amount** Number or Analyzed Type Run **Amount** Analyst Lab Total/NA SM 2540C 100 mL 100 mL 377880 11/05/21 17:30 KMM TAL PIT Analysis Total/NA Prep PrecSep-21 749.28 mL 1.0 g 535772 11/09/21 16:45 LPS TAL SL Total/NA Analysis 9315 1 540863 12/08/21 18:26 FLC TAL SL Instrument ID: GFPCRED PrecSep_0 Total/NA Prep 750.25 mL 1.0 g 542176 12/15/21 10:20 BMP TAL SL Total/NA Analysis 9320 1 543041 12/20/21 14:05 MLK TAL SL Instrument ID: GFPCBLUE Total/NA Analysis Ra226 Ra228 543272 12/21/21 17:31 EMH TAL SL Instrument ID: NOEQUIP

Client Sample ID: WAP-4D Date Collected: 11/02/21 09:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 9056A ID: INTEGRION		1			377720	11/05/21 10:50	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020A ID: A		1			378981	11/13/21 22:27	RJR	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020A ID: A		1			379323	11/17/21 13:59	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrument	EPA 7470A ID: HGY		1			378967	11/15/21 12:24	RJR	TAL PIT
Total/NA	Analysis Instrument	EPA 9040C ID: NOEQUIP		1			377902	11/06/21 09:58	MJH	TAL PIT
Total/NA	Analysis Instrument	SM 2540C ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			991.25 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrument	9315 ID: GFPCPURPLE		1			540333	12/05/21 20:22	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.60 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrument	9320 ID: GFPCBLUE		1			543041	12/20/21 14:05	MLK	TAL SL
Total/NA	Analysis Instrument	Ra226_Ra228 ID: NOEQUIP		1			543272	12/21/21 17:31	EMH	TAL SL

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Matrix: Water

Matrix: Water

Lab Sample ID: 180-129535-2

Lab Sample ID: 180-129535-3

Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-5S

Date Collected: 11/01/21 13:55 Date Received: 11/04/21 14:15 Lab Sample ID: 180-129535-4

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			377720	11/05/21 16:34	JRB	TAL PIT
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION	RA	1			381392	12/09/21 08:38	JRB	TAL PIT
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION	RA	10			381392	12/09/21 08:52	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			378981	11/13/21 22:31	RJR	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		5			379323	11/17/21 14:03	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			378967	11/15/21 12:28	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			377902	11/06/21 09:59	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			999.46 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCPURPLE	Ē	1		·	540333	12/05/21 20:22	FLC	TAL SL
Total/NA	Prep	PrecSep_0			1000.73 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCBLUE		1		_	543041	12/20/21 14:05	MLK	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Client Sample ID: WAP-5I

Date Collected: 11/01/21 14:53

Lab Sample ID: 180-129535-5

Matrix: Water

Date Received: 11/04/21 14:15

	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 t ID: INTEGRION		1			377720	11/05/21 23:07	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			378981	11/13/21 22:46	RJR	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			379323	11/17/21 14:07	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			378967	11/15/21 12:29	RJR	TAL PIT

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Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-5I

Date Collected: 11/01/21 14:53

Lab Sample ID: 180-129535-5

Matrix: Water

Date Received: 11/04/21 14:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9040C		1			377902	11/06/21 10:01	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			1000.49 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCPURPLE		1			540333	12/05/21 20:22	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.53 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1			543041	12/20/21 14:01	MLK	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Lab Sample ID: 180-129535-6 **Client Sample ID: WAP-5D**

Matrix: Water Date Collected: 11/01/21 15:52

	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			377720	11/05/21 17:10	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			378981	11/13/21 22:49	RJR	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			379323	11/17/21 14:10	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			378967	11/15/21 12:30	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			377903	11/06/21 10:06	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			1000.17 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1			540407	12/06/21 10:27	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.51 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1		-	543041	12/20/21 14:02	MLK	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

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Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-6S

Date Collected: 11/02/21 12:29 Date Received: 11/04/21 14:15 Lab Sample ID: 180-129535-7

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			377720	11/05/21 08:45	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A nt ID: A		1			378827	11/12/21 13:06	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A nt ID: A		1			378981	11/13/21 11:43	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGY		1			378967	11/15/21 12:31	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C nt ID: NOEQUIP		1			377903	11/06/21 10:09	MJH	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			750.13 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			540407	12/06/21 10:27	ANW	TAL SL
Total/NA	Prep	PrecSep 0			750.71 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCBLUE		1		-	543041	12/20/21 14:02	MLK	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Client Sample ID: WAP-6I Lab Sample ID: 180-129535-8 Date Collected: 11/02/21 13:04 **Matrix: Water**

Date Received: 11/04/21 14:15

	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			377720	11/06/21 00:01	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			378827	11/12/21 13:31	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			378981	11/13/21 12:45	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			378967	11/15/21 12:34	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			377903	11/06/21 10:13	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT

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Job ID: 180-129535-1

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

Lab Sample ID: 180-129535-8 **Client Sample ID: WAP-61** Date Collected: 11/02/21 13:04

Matrix: Water

Date Received: 11/04/21 14:15

	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			749.58 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumer	9315 t ID: GFPCRED		1			540390	12/06/21 10:32	ANW	TAL SL
Total/NA	Prep	PrecSep_0			750.01 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumer	9320 t ID: GFPCBLUE		1			543041	12/20/21 14:02	MLK	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 t ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Lab Sample ID: 180-129535-9 **Client Sample ID: WAP-6D**

Date Collected: 11/02/21 15:42 **Matrix: Water**

Date Received: 11/04/21 14:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 9056A ID: INTEGRION		1			377720	11/06/21 00:19	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020A ID: A		1			378827	11/12/21 13:35	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020A ID: A		1			378981	11/13/21 12:48	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrument	EPA 7470A ID: HGY		1			378967	11/15/21 12:35	RJR	TAL PIT
Total/NA	Analysis Instrument	EPA 9040C ID: NOEQUIP		1			377903	11/06/21 10:14	MJH	TAL PIT
Total/NA	Analysis Instrument	SM 2540C ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			993.59 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrument	9315 ID: GFPCRED		1			540390	12/06/21 10:32	ANW	TAL SL
Total/NA	Prep	PrecSep_0			750.28 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrument	9320 ID: GFPCBLUE		1			543041	12/20/21 14:02	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228 ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Client Sample ID: WAP-8S Lab Sample ID: 180-129535-10

Date Collected: 11/02/21 09:52 Date Received: 11/04/21 14:15

Duan Time	Batch	Batch	Dun	Dil	Initial	Final	Batch	Prepared	Amalyat	Lab
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			377720	11/06/21 00:37	JRB	TAL PIT
	Instrumer	nt ID: INTEGRION								

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Matrix: Water

Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-8S

Date Collected: 11/02/21 09:52 Date Received: 11/04/21 14:15 Lab Sample ID: 180-129535-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		5			377720	11/06/21 00:54	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			378827	11/12/21 13:39	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		2			378981	11/13/21 12:59	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			378967	11/15/21 12:36	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			377903	11/06/21 10:16	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			999.34 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			540390	12/06/21 10:33	ANW	TAL SL
Total/NA	Prep	PrecSep 0			1000.58 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1		·	543041	12/20/21 14:02	MLK	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Client Sample ID: WAP-8I Lab Sample ID: 180-129535-11 Date Collected: 11/02/21 10:34 **Matrix: Water**

Date Received: 11/04/21 14:15

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			377720	11/06/21 01:12	JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: A		1	50 mL	50 mL	378429 378827	11/11/21 11:00 11/12/21 13:42		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: A		1	50 mL	50 mL	378429 378981	11/11/21 11:00 11/13/21 13:03		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGY		1	25 mL	25 mL	378159 378967	11/09/21 06:20 11/15/21 12:37		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			377903	11/06/21 10:18	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT

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Client Sample ID: WAP-8I Lab Sample ID: 180-129535-11

Date Collected: 11/02/21 10:34 Date Received: 11/04/21 14:15

Matrix: Water

Job ID: 180-129535-1

	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			1000.12 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCRED		1			540390	12/06/21 10:33	ANW	TAL SL
Total/NA	Prep	PrecSep_0			750.86 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			543041	12/20/21 14:03	MLK	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			543272	12/21/21 17:31	EMH	TAL SL

Lab Sample ID: 180-129535-12 **Client Sample ID: WAP-8D**

Date Collected: 11/02/21 11:30 **Matrix: Water**

Date Received: 11/04/21 14:15

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			377720	11/06/21 02:06	JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: A		1	50 mL	50 mL	378429 378827	11/11/21 11:00 11/12/21 13:46		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: A		1	50 mL	50 mL	378429 378981	11/11/21 11:00 11/13/21 13:06		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGY		1	25 mL	25 mL	378159 378967	11/09/21 06:20 11/15/21 12:40		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			377903	11/06/21 10:19	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCRED		1	999.51 mL	1.0 g	535772 540390	11/09/21 16:45 12/06/21 10:33		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCBLUE		1	749.09 mL	1.0 g	542176 543041	12/15/21 10:20 12/20/21 14:03		TAL SL TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Client Sample ID: WAP-9S Lab Sample ID: 180-129535-13

Date Collected: 11/02/21 15:42

Date Received: 11/04/21 14:15

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		1			377720	11/06/21 02:24	JRB	TAL PIT
	Instrumer	t ID: INTEGRION								

Matrix: Water

Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-9S

Date Collected: 11/02/21 15:42 Date Received: 11/04/21 14:15 Lab Sample ID: 180-129535-13

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	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			378827	11/12/21 13:49	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			378981	11/13/21 13:10	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			378967	11/15/21 12:41	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			377903	11/06/21 10:21	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			500.53 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCRED		1			540390	12/06/21 10:33	ANW	TAL SL
Total/NA	Prep	PrecSep_0			500.95 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCBLUE		1		-	543041	12/20/21 14:03	MLK	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Client Sample ID: WAP-9I
Date Collected: 11/03/21 07:50

Lab Sample ID: 180-129535-14
Matrix: Water

Date Collected: 11/03/21 07:50
Date Received: 11/04/21 14:15

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 t ID: INTEGRION		1			377720	11/06/21 03:00		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: A		1	50 mL	50 mL	378429 378827	11/11/21 11:00 11/12/21 14:00		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: A		1	50 mL	50 mL	378429 378981	11/11/21 11:00 11/13/21 13:14		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGY		1	25 mL	25 mL	378159 378967	11/09/21 06:20 11/15/21 12:42		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			377903	11/06/21 10:24	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	378125	11/08/21 17:13	KMM	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCRED		1	750.60 mL	1.0 g	535772 540390	11/09/21 16:45 12/06/21 10:34		TAL SL TAL SL

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Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-9I Lab Sample ID: 180-129535-14

Date Collected: 11/03/21 07:50 **Matrix: Water**

Date Received: 11/04/21 14:15

	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			750.55 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCBLUE		1			543041	12/20/21 14:03	MLK	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			543272	12/21/21 17:31	EMH	TAL SL

Client Sample ID: WAP-9D Lab Sample ID: 180-129535-15

Date Collected: 11/03/21 08:30 **Matrix: Water**

Date Received: 11/04/21 14:15

	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			377720	11/06/21 03:17	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			378827	11/12/21 14:04	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			378981	11/13/21 13:17	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			378967	11/15/21 12:43	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			377903	11/06/21 10:28	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	378125	11/08/21 17:13	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			750.27 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCRED		1			540390	12/06/21 10:34	ANW	TAL SL
Total/NA	Prep	PrecSep_0			750.19 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCBLUE		1			543041	12/20/21 14:04	MLK	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Client Sample ID: FB-1 Lab Sample ID: 180-129535-16

Date Collected: 11/01/21 14:12 Date Received: 11/04/21 14:15

	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			377720	11/06/21 03:35	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A at ID: A		1			378827	11/12/21 14:07	RSK	TAL PIT

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Matrix: Water

Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: FB-1 Lab Sample ID: 180-129535-16

Date Collected: 11/01/21 14:12 **Matrix: Water** Date Received: 11/04/21 14:15

	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	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			378981	11/13/21 13:21	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			378967	11/15/21 12:44	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			377903	11/06/21 10:29	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			1000.53 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			540390	12/06/21 10:34	ANW	TAL SL
Total/NA	Prep	PrecSep_0			750.21 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1			543041	12/20/21 14:04	MLK	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			543272	12/21/21 17:31	EMH	TAL SL

Client Sample ID: DUP-1 Lab Sample ID: 180-129535-17

Date Collected: 11/01/21 00:00 **Matrix: Water** Date Received: 11/04/21 14:15

	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 t ID: INTEGRION		1			377720	11/06/21 03:53	JRB	TAL PIT
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION		10			377720	11/06/21 04:11	JRB	TAL PIT
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION	RA	1			381392	12/09/21 09:07	JRB	TAL PIT
Total/NA	Analysis Instrumen	EPA 9056A t ID: INTEGRION	RA	10			381392	12/09/21 09:21	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			378827	11/12/21 14:11	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		2			378981	11/13/21 13:25	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			378967	11/15/21 12:45	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			377903	11/06/21 10:31	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT

Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: DUP-1 Lab Sample ID: 180-129535-17

Date Collected: 11/01/21 00:00 **Matrix: Water** Date Received: 11/04/21 14:15

	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			999.93 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCRED		1			540390	12/06/21 10:31	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.11 mL	1.0 g	542176	12/15/21 10:20	ВМР	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCPURPLE		1			543040	12/20/21 13:58	MLK	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Lab Sample ID: 180-129535-18 **Client Sample ID: DUP-2**

Date Collected: 11/02/21 00:00 **Matrix: Water** Date Received: 11/04/21 14:15

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			377720	11/06/21 04:29	JRB	TAL PIT
Total/NA	Analysis Instrumen	EPA 9056A at ID: INTEGRION		5			377720	11/06/21 04:47	JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A It ID: A		1	50 mL	50 mL	378429 378827	11/11/21 11:00 11/12/21 14:15		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A It ID: A		2	50 mL	50 mL	378429 378981	11/11/21 11:00 11/13/21 13:36		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A tt ID: HGY		1	25 mL	25 mL	378159 378967	11/09/21 06:20 11/15/21 12:46		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			377903	11/06/21 10:33	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	377880	11/05/21 17:30	KMM	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 it ID: GFPCRED		1	750.53 mL	1.0 g	535772 540390	11/09/21 16:45 12/06/21 10:31		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 tt ID: GFPCPURPLE	Ī	1	1000.15 mL	1.0 g	542176 543040	12/15/21 10:20 12/20/21 13:58		TAL SL TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-3S

Date Collected: 11/03/21 09:12 Date Received: 11/04/21 14:15

Lab Sample ID: 180-129535-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A at ID: INTEGRION	- 1411	1	Amount	Amount	377720	11/06/21 05:40		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A at ID: A		1	50 mL	50 mL	378429 378827	11/11/21 11:00 11/12/21 14:18		TAL PIT TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A at ID: A		2	50 mL	50 mL	378429 378981	11/11/21 11:00 11/13/21 13:46		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	7470A EPA 7470A at ID: HGY		1	25 mL	25 mL	378159 378967	11/09/21 06:20 11/15/21 12:47		TAL PIT TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: OZ		1			377921	11/06/21 08:17	MJH	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	378127	11/08/21 17:25	KMM	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep-21 9315 at ID: GFPCPURPLI	Ξ	1	750.35 mL	1.0 g	535772 540406	11/09/21 16:45 12/06/21 10:35		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep_0 9320 at ID: GFPCPURPLI	Ξ	1	750.76 mL	1.0 g	542176 543040	12/15/21 10:20 12/20/21 13:58		TAL SL TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Client Sample ID: WAP-3D Lab Sample ID: 180-129535-20 **Matrix: Water**

Date Collected: 11/03/21 09:54

Date Received: 11/04/21 14:15

	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 t ID: INTEGRION		1			377720	11/06/21 06:16	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			378827	11/12/21 14:22	RSK	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378429	11/11/21 11:00	KFS	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		2			378981	11/13/21 13:57	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378159	11/09/21 06:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			378967	11/15/21 12:49	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: OZ		1			377921	11/06/21 08:22	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	378127	11/08/21 17:25	KMM	TAL PIT

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Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-3D Lab Sample ID: 180-129535-20

Date Collected: 11/03/21 09:54

Date Received: 11/04/21 14:15

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	PrecSep-21			749.72 mL	1.0 g	535772	11/09/21 16:45	LPS	TAL SL
Total/NA	Analysis Instrumer	9315 at ID: GFPCPURPLE		1			540406	12/06/21 10:36	ANW	TAL SL
Total/NA	Prep	PrecSep_0			1000.39 mL	1.0 g	542176	12/15/21 10:20	BMP	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCPURPLE		1			543040	12/20/21 13:59	MLK	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			543272	12/21/21 17:31	ЕМН	TAL SL

Laboratory References:

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058 TAL SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL PIT

Batch Type: Prep

KFS = Kelly Shannon

RGM = Rebecca Manns

RJR = Ron Rosenbaum

Batch Type: Analysis

JRB = James Burzio

KMM = Kendric Moore

MJH = Michael Houde

RJR = Ron Rosenbaum

RSK = Robert Kurtz

Lab: TAL SL

Batch Type: Prep

BMP = Bailey Pinette

LPS = Lauren Szostak

Batch Type: Analysis

ANW = Aamber Woods

EMH = Elizabeth Hoerchler

FLC = Fernando Cruz

MLK = Micha Korrinhizer

Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-4S

Lab Sample ID: 180-129535-1 Date Collected: 11/02/21 07:47

Matrix: Water

Date Received: 11/04/21 14:15

Analyte

Carrier

Ba Carrier

Y Carrier

Radium-228

Result Qualifier

%Yield Qualifier

0.262 U

82.6

82.2

 $(2\sigma + / -)$

0.362

Limits

40 - 110

40 - 110

Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride		160		1.0	0.71	mg/L			11/05/21 09:56	
Fluoride		0.28		0.10	0.026	mg/L			11/05/21 09:56	
Sulfate		520		10	7.6	mg/L			11/05/21 10:14	1
Method: EPA 6020A	- Metals	(ICP/MS) - To	otal Reco	verable						
Analyte		•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony		ND		0.020	0.0038	mg/L		11/12/21 11:00	11/17/21 13:52	1
Arsenic		0.0046		0.0010	0.00031	mg/L		11/12/21 11:00	11/13/21 22:09	
Barium		0.043		0.010	0.0016	mg/L		11/12/21 11:00	11/13/21 22:09	
Beryllium		ND		0.0010	0.00018	mg/L		11/12/21 11:00	11/13/21 22:09	
Boron		13		0.80	0.39	mg/L		11/12/21 11:00	11/17/21 13:52	1
Cadmium		ND		0.0010	0.00022	mg/L		11/12/21 11:00	11/13/21 22:09	
Calcium		290		0.50	0.13	mg/L		11/12/21 11:00	11/13/21 22:09	
Chromium		ND		0.0020	0.0015	-		11/12/21 11:00	11/13/21 22:09	
Cobalt		0.0023	J	0.0050	0.0013	-		11/12/21 11:00	11/17/21 13:52	1
Lead		0.00013		0.0010	0.00013	mg/L		11/12/21 11:00	11/13/21 22:09	
Lithium		ND		0.0050	0.0034	-		11/12/21 11:00	11/13/21 22:09	
Molybdenum		0.46		0.0050	0.00061	mg/L		11/12/21 11:00	11/13/21 22:09	
Selenium		ND		0.0050	0.0015	mg/L		11/12/21 11:00	11/13/21 22:09	
Thallium		ND		0.0010	0.00015	mg/L		11/12/21 11:00	11/13/21 22:09	
Method: EPA 7470A	Morour	w (CVA A)								
Analyte	- Wercur	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Mercury		ND		0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:22	
· · ·										
General Chemistry		D 14	0	D.	MDI	11-24	_	Duna and	A I I	D!! F-
Analyte			Qualifier	RL		Unit	_ D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids		1300		10	10	mg/L			11/05/21 17:30	
Analyte		Result	Qualifier	RL	RL		_ D	Prepared	Analyzed	Dil Fa
рН		7.5	HF	0.1	0.1	SU			11/06/21 09:54	
Method: 9315 - Radiu	u <mark>m-226</mark> (GFPC)								
	·	•	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL I	MDC Unit		Prepared	Analyzed	Dil Fa
Radium-226	0.0517	U	0.140	0.140	1.00	0.256 pCi/L		11/09/21 16:45	12/05/21 20:18	
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fa
Ba Carrier	85.8		40 - 110						12/05/21 20:18	
Mothod: 0220 Podi:	um 220 /	CEDC)								
Method: 9320 - Radiu	uIII-220 (GFFC)	Count	Total						
			Uncert.	Uncert.						
				3						

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Analyzed

Analyzed

12/15/21 10:20 12/20/21 14:04

12/15/21 10:20 12/20/21 14:04

12/15/21 10:20 12/20/21 14:04

 $(2\sigma + / -)$

0.362

RL

1.00

MDC Unit

0.605 pCi/L

Prepared

Prepared

Dil Fac

Dil Fac

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-4S

Lab Sample ID: 180-129535-1 Date Collected: 11/02/21 07:47 **Matrix: Water**

Date Received: 11/04/21 14:15

Method: Ra226	Ra228 - Combir	ed Radium-226 and	Radium-228

_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.313	U	0.388	0.388	5.00	0.605	pCi/L		12/21/21 17:31	1

Client Sample ID: WAP-4I Lab Sample ID: 180-129535-2 **Matrix: Water**

Date Collected: 11/02/21 08:22 Date Received: 11/04/21 14:15

Method: EPA 9056A - Anions, Ion Chromatography Analyte Result Qualifier RL

MDL Unit Prepared Analyzed Dil Fac Chloride 0.71 mg/L 11/05/21 10:32 29 1.0 0.10 11/05/21 10:32 **Fluoride** 0.12 0.026 mg/L 1 **Sulfate** 1.0 0.76 mg/L 11/05/21 10:32 46

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

Wethou. EFA 6020A - N	netais (ICP/IVIS) - IC	ital Recovi	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/12/21 11:00	11/13/21 22:24	1
Arsenic	0.013		0.0010	0.00031	mg/L		11/12/21 11:00	11/13/21 22:24	1
Barium	0.21		0.010	0.0016	mg/L		11/12/21 11:00	11/13/21 22:24	1
Beryllium	ND		0.0010	0.00018	mg/L		11/12/21 11:00	11/13/21 22:24	1
Boron	0.18		0.080	0.039	mg/L		11/12/21 11:00	11/17/21 13:56	1
Cadmium	ND		0.0010	0.00022	mg/L		11/12/21 11:00	11/13/21 22:24	1
Calcium	47		0.50	0.13	mg/L		11/12/21 11:00	11/13/21 22:24	1
Chromium	ND		0.0020	0.0015	mg/L		11/12/21 11:00	11/13/21 22:24	1
Cobalt	0.0011		0.00050	0.00013	mg/L		11/12/21 11:00	11/17/21 13:56	1
Lead	0.00015	J	0.0010	0.00013	mg/L		11/12/21 11:00	11/13/21 22:24	1
Lithium	0.0044	J	0.0050	0.0034	mg/L		11/12/21 11:00	11/13/21 22:24	1
Molybdenum	0.0032	J	0.0050	0.00061	mg/L		11/12/21 11:00	11/13/21 22:24	1
Selenium	ND		0.0050	0.0015	mg/L		11/12/21 11:00	11/13/21 22:24	1
Thallium	ND		0.0010	0.00015	mg/L		11/12/21 11:00	11/13/21 22:24	1
_									

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	ma/L		11/09/21 06:20	11/15/21 12:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids	240		10	10	mg/L			11/05/21 17:30	1	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac	
nH	7.7	HE	0.1	0.1	SU			11/06/21 09:56	1	

Wethod: 9315 - Ra	adium-226 (GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.807		0.229	0.241	1.00	0.225	pCi/L	11/09/21 16:45	12/08/21 18:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.1		40 - 110					11/09/21 16:45	12/08/21 18:26	1

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Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-4I

Lab Sample ID: 180-129535-2

Date Collected: 11/02/21 08:22 **Matrix: Water** Date Received: 11/04/21 14:15

Method: 9320 - Radium-228 (GFPC) Count Total Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-228 0.797 0.430 0.437 1.00 0.635 pCi/L 12/15/21 10:20 12/20/21 14:05 Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 83.8 40 - 110 12/15/21 10:20 12/20/21 14:05 81.1 40 - 110 12/15/21 10:20 12/20/21 14:05 Y Carrier

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228 Total Count Uncert. Uncert. Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ **MDC** Unit Analyte RL Prepared Analyzed Dil Fac **Combined Radium** 0.487 0.499 5.00 0.635 pCi/L 12/21/21 17:31 1.60 226 + 228

Client Sample ID: WAP-4D Lab Sample ID: 180-129535-3 Date Collected: 11/02/21 09:00 **Matrix: Water**

Date Received: 11/04/21 14:15

Method: EPA 9056A - Anions,	Ion Chromatography							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21	1.0	0.71	mg/L			11/05/21 10:50	1
Fluoride	0.13	0.10	0.026	mg/L			11/05/21 10:50	1
Sulfate	26	1.0	0.76	mg/L			11/05/21 10:50	1

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable Dil Fac Result Qualifier RL **MDL** Unit Analyte D **Prepared** Analyzed 0.00038 mg/L Antimony ND 0.0020 11/12/21 11:00 11/13/21 22:27 **Arsenic** 0.0097 0.0010 0.00031 mg/L 11/12/21 11:00 11/13/21 22:27 **Barium** 0.28 0.010 0.0016 mg/L 11/12/21 11:00 11/13/21 22:27 Beryllium ND 0.0010 0.00018 mg/L 11/12/21 11:00 11/13/21 22:27 11/17/21 13:59 **Boron** 0.076 0.080 0.039 mg/L 11/12/21 11:00 11/13/21 22:27 Cadmium ND 0.0010 0.00022 mg/L 11/12/21 11:00 11/12/21 11:00 11/13/21 22:27 0.50 0.13 mg/L Calcium **50** 0.0015 mg/L 11/12/21 11:00 11/13/21 22:27 Chromium ND 0.0020 Cobalt 0.00023 J ^2 0.00050 0.00013 mg/L 11/12/21 11:00 11/13/21 22:27 Lead ND 0.0010 0.00013 mg/L 11/12/21 11:00 11/13/21 22:27 Lithium ND 0.0050 0.0034 mg/L 11/12/21 11:00 11/13/21 22:27 Molybdenum 0.0050 0.0050 0.00061 mg/L 11/12/21 11:00 11/13/21 22:27 Selenium ND 0.0050 0.0015 mg/L 11/12/21 11:00 11/13/21 22:27 Thallium 0.00015 mg/L ND 0.0010 11/12/21 11:00 11/13/21 22:27

Welliou. EPA /4/UA - Wercury	(CVAA)							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:24	1
General Chemistry								

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	250		10	10	mg/L			11/05/21 17:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.8	HF	0.1	0.1	SU			11/06/21 09:58	1

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Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-4D

Date Collected: 11/02/21 09:00 Date Received: 11/04/21 14:15 Lab Sample ID: 180-129535-3

Matrix: Water

Method:	9315	- Radium-22	6 (GFPC)

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.340		0.155	0.158	1.00	0.184	pCi/L	11/09/21 16:45	12/05/21 20:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.0		40 - 110					11/09/21 16:45	12/05/21 20:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.12		0.473	0.484	1.00	0.667	pCi/L	12/15/21 10:20	12/20/21 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.6		40 - 110					12/15/21 10:20	12/20/21 14:05	1
Y Carrier	81.9		40 - 110					12/15/21 10:20	12/20/21 14:05	1

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

_			Count Uncert.	Total Uncert.					
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Uni	it Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.46		0.498	0.509	5.00	0.667 pCi/	i/L	12/21/21 17:31	1

Client Sample ID: WAP-5S

Date Collected: 11/01/21 13:55 Date Received: 11/04/21 14:15

Lab Sample ID: 180-129535-4

Matrix: Water

Method: EPA 9056A -	- Anions, Ion Chromatography
Amalusta	Decult Qualifier

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23		1.0	0.71	mg/L			11/05/21 16:34	1
Fluoride	1.1		0.10	0.026	mg/L			11/05/21 16:34	1
Sulfate	22		1.0	0.76	mg/L			11/05/21 16:34	1

Method: EPA 90	56A - Anions, Ion	Chromatography - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150	Н	1.0	0.71	mg/L			12/09/21 08:38	1
Fluoride	0.091	JH	0.10	0.026	mg/L			12/09/21 08:38	1
Sulfate	420	H	10	7.6	mg/L			12/09/21 08:52	10

Method: EPA 6020A	- Metais (ICP/MS) - 10	otai Recove	erabie						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/12/21 11:00	11/13/21 22:31	1
Arsenic	0.00070	J	0.0010	0.00031	mg/L		11/12/21 11:00	11/13/21 22:31	1
Barium	0.046		0.010	0.0016	mg/L		11/12/21 11:00	11/13/21 22:31	1
Beryllium	ND		0.0010	0.00018	mg/L		11/12/21 11:00	11/13/21 22:31	1
Boron	4.8		0.40	0.19	mg/L		11/12/21 11:00	11/17/21 14:03	5
Cadmium	ND		0.0010	0.00022	mg/L		11/12/21 11:00	11/13/21 22:31	1
Calcium	240		0.50	0.13	mg/L		11/12/21 11:00	11/13/21 22:31	1
Chromium	ND		0.0020	0.0015	mg/L		11/12/21 11:00	11/13/21 22:31	1
Cobalt	0.0076		0.0025	0.00067	mg/L		11/12/21 11:00	11/17/21 14:03	5
Lead	ND		0.0010	0.00013	mg/L		11/12/21 11:00	11/13/21 22:31	1

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Job ID: 180-129535-1

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

Lab Sample ID: 180-129535-4 **Client Sample ID: WAP-5S**

Date Collected: 11/01/21 13:55 **Matrix: Water** Date Received: 11/04/21 14:15

Mothod: EDA 6020A	Motolo (ICD/MC)	Total Decoverable (Continued)

Analyzed	Dil Fac
11/13/21 22:31	1
11/13/21 22:31	1
11/13/21 22:31	1
11/13/21 22:31	1
	11/13/21 22:31 11/13/21 22:31 11/13/21 22:31

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013 mg/L		11/09/21 06:20	11/15/21 12:28	1

General Chemistry

Gonoral Gnonnouty									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10	10	mg/L			11/05/21 17:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.0	HF	0.1	0.1	SU			11/06/21 09:59	1

Method: 9315 - Radium-226 (GFPC)

metriou. 0010 - Ita	didiii-220 (3.1.0)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.105	U	0.125	0.125	1.00	0.206	pCi/L	11/09/21 16:45	12/05/21 20:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					11/09/21 16:45	12/05/21 20:22	1

Method: 9320 - Radium-228 (GFPC)

Analyte Radium-228	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-) 0.323	RL 1.00	MDC 0.474	 Prepared 12/15/21 10:20	Analyzed 12/20/21 14:05	Dil Fac
Carrier Ba Carrier	% Yield 80.8	Qualifier	Limits 40 - 110				Prepared 12/15/21 10:20	Analyzed 12/20/21 14:05	Dil Fac
Y Carrier	83.7		40 - 110				12/15/21 10:20	12/20/21 14:05	1

Method: 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	0.677		0.343	0.346	5.00	0.474	pCi/L		12/21/21 17:31	1

Client Sample ID: WAP-51	Lab Sample ID: 180-129535-5
Date Collected: 11/01/21 14:53	Matrix: Water
Date Received: 11/04/21 14:15	

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Welliou. EPA 3036A - Alli	ons, ion chroma	tography								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	28		1.0	0.71	mg/L			11/05/21 23:07	1	
Fluoride	0.12		0.10	0.026	mg/L			11/05/21 23:07	1	
Sulfate	47		1.0	0.76	mg/L			11/05/21 23:07	1	

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-5I Lab Sample ID: 180-129535-5

Date Collected: 11/01/21 14:53

Matrix: Water

Date Received: 11/04/21 14:15

Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony		ND		0.0020	0.00038	mg/L		11/12/21 11:00	11/13/21 22:46	
Arsenic		0.010		0.0010	0.00031	•		11/12/21 11:00	11/13/21 22:46	
Barium		0.13		0.010	0.0016	mg/L		11/12/21 11:00	11/13/21 22:46	
Beryllium		ND		0.0010	0.00018	mg/L		11/12/21 11:00	11/13/21 22:46	
Boron		0.14		0.080	0.039	mg/L		11/12/21 11:00	11/17/21 14:07	
Cadmium		ND		0.0010	0.00022	mg/L		11/12/21 11:00	11/13/21 22:46	
Calcium		45		0.50	0.13	mg/L		11/12/21 11:00	11/13/21 22:46	
Chromium		ND		0.0020	0.0015	mg/L		11/12/21 11:00	11/13/21 22:46	
Cobalt		0.00048	J ^2	0.00050	0.00013	mg/L		11/12/21 11:00	11/13/21 22:46	
Lead		ND		0.0010	0.00013	mg/L		11/12/21 11:00	11/13/21 22:46	
Lithium		0.0038	J	0.0050	0.0034	mg/L		11/12/21 11:00	11/13/21 22:46	
Molybdenum		0.0019		0.0050	0.00061	mg/L		11/12/21 11:00	11/13/21 22:46	
Selenium		ND		0.0050	0.0015			11/12/21 11:00	11/13/21 22:46	
Thallium		ND		0.0010	0.00015	-		11/12/21 11:00	11/13/21 22:46	
Method: EPA 7470A	. Mercur	v (CVAA)								
Analyte	morour	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Mercury		ND	-	0.00020	0.00013		=	11/09/21 06:20	11/15/21 12:29	
Analyte Total Dissolved Solids		Result 240	Qualifier	RL 10		Unit mg/L	<u>D</u>	Prepared	Analyzed 11/05/21 17:30	Dil Fa
Analyte		Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
pH		7.6	HF	0.1	0.1	SU			11/06/21 10:01	
Method: 9315 - Radiu	ım-226 (GFPC)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL I	MDC I	Unit	Prepared	Analyzed	Dil Fa
Radium-226	0.415		0.177	0.181	1.00).213	pCi/L	11/09/21 16:45	12/05/21 20:22	
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fa
Ba Carrier	95.4		40 - 110					11/09/21 16:45	12/05/21 20:22	
Method: 9320 - Radiu	ım- <mark>228</mark> (GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL I	MDC I	Unit	Prepared	Analyzed	Dil Fa
Radium-228	0.928		0.385	0.394	1.00).532	pCi/L	12/15/21 10:20	12/20/21 14:01	
Carrier		Qualifier	Limits					Prepared	Analyzed	Dil Fa
Ba Carrier	95.3		40 - 110					10/15/01 10:00	12/20/21 14:01	

Ba Carrier	95.3	40 - 110			12/15/21 10:20	12/20/21 14:01	7
Y Carrier	79.6	40 - 110			12/15/21 10:20	12/20/21 14:01	1
Method: Ra226_Ra	228 - Combined	l Radium-226 a	nd Radium-	228			
_		Count	Total				
		Uncert.	Uncert.				

RL

5.00

MDC Unit

0.532 pCi/L

Prepared

(2σ+/-)

0.434

226 + 228

Combined Radium

Analyte

Result Qualifier

1.34

(2σ+/-)

0.424

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Dil Fac

1/7/2022

Analyzed

12/21/21 17:31

_

4

6

8

10

19

16

Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-5D

Lab Sample ID: 180-129535-6 Date Collected: 11/01/21 15:52

Matrix: Water

Date Received: 11/04/21 14:15

Y Carrier

80.0

Method: EPA 9056A Analyte		•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride		ND		1.0	0.71				11/05/21 17:10	
Fluoride		0.047	J	0.10	0.026	mg/L			11/05/21 17:10	
Sulfate		0.87	J	1.0		mg/L			11/05/21 17:10	
Method: EPA 6020A	- Metals	(ICP/MS) - To	otal Reco	verable						
Analyte			Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony		ND		0.0020	0.00038	mg/L		11/12/21 11:00	11/13/21 22:49	
Arsenic		0.010		0.0010	0.00031	mg/L		11/12/21 11:00	11/13/21 22:49	
Barium		0.19		0.010	0.0016	mg/L		11/12/21 11:00	11/13/21 22:49	
Beryllium		ND		0.0010	0.00018	mg/L		11/12/21 11:00	11/13/21 22:49	
Boron		0.082		0.080	0.039	mg/L		11/12/21 11:00	11/17/21 14:10	
Cadmium		ND		0.0010	0.00022	mg/L		11/12/21 11:00	11/13/21 22:49	
Calcium		47		0.50	0.13	mg/L		11/12/21 11:00	11/13/21 22:49	
Chromium		ND		0.0020	0.0015	mg/L		11/12/21 11:00	11/13/21 22:49	
Cobalt		ND		0.00050	0.00013	mg/L		11/12/21 11:00	11/13/21 22:49	
Lead		ND		0.0010	0.00013	mg/L		11/12/21 11:00	11/13/21 22:49	
Lithium		ND		0.0050	0.0034	-		11/12/21 11:00	11/13/21 22:49	
Molybdenum		0.0039	J	0.0050	0.00061	mg/L		11/12/21 11:00	11/13/21 22:49	
Selenium		ND		0.0050	0.0015	mg/L		11/12/21 11:00	11/13/21 22:49	
Thallium		ND		0.0010	0.00015	ma/L		11/12/21 11:00	11/13/21 22:49	
General Chemistry Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids		220		10		mg/L	_ =		11/05/21 17:30	
Analyte			Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
pH		7.6	HF	0.1	0.1	SU			11/06/21 10:06	
Method: 9315 - Radiu	ım-226 ((GFPC)								
	((0.1.0)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL I	MDC Unit		Prepared	Analyzed	Dil Fa
Radium-226	0.320		0.158	0.161	1.00	0.204 pCi/L		11/09/21 16:45	12/06/21 10:27	
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fa
Ba Carrier	97.0		40 - 110						12/06/21 10:27	
Method: 9320 - Radii	220 /	(CEDC)								
Wethod: 9,520 - Radii	ım-228 ((GFPC)	Count	Total						
				Uncert.						
	Result	Qualifier	Uncert.		RI I	MDC Unit		Prepared	Analyzed	Dil Fa
Analyte		Qualifier	(2σ+/-)	(2σ+/-)		MDC Unit		Prepared 12/15/21 10:20	Analyzed 12/20/21 14:02	
Analyte	Result 0.331					MDC Unit 0.416 pCi/L			Analyzed 12/20/21 14:02	
Analyte Radium-228 Carrier Ba Carrier	0.331		(2σ+/-)	(2σ+/-)				12/15/21 10:20 Prepared		Dil Fa

1/7/2022

12/15/21 10:20 12/20/21 14:02

40 - 110

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-129535-6 **Client Sample ID: WAP-5D**

Date Collected: 11/01/21 15:52 **Matrix: Water**

Date Received: 11/04/21 14:15

Method: 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	0.652		0.308	0.311	5.00	0.416	pCi/L		12/21/21 17:31	1
226 + 228										

Client Sample ID: WAP-6S Lab Sample ID: 180-129535-7

Date Collected: 11/02/21 12:29 **Matrix: Water**

Date Received: 11/04/21 14:15

Method: EPA 9056A -	Anions, Ion Chromatograpl	hy						
Analyte	Result Qualifier	r RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32	1.0	0.71	mg/L			11/05/21 08:45	1
Fluoride	0.39	0.10	0.026	mg/L			11/05/21 08:45	1
Sulfate	95	1.0	0.76	mg/L			11/05/21 08:45	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 13:06	1
Arsenic	0.0010		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 13:06	1
Barium	0.042		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 13:06	1
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 13:06	1
Boron	2.2	F1	0.080	0.039	mg/L		11/11/21 11:00	11/13/21 11:43	1
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 13:06	1
Calcium	89		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 13:06	1
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 13:06	1
Cobalt	0.00092		0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 13:06	1
Lead	0.00018	J	0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 13:06	1
Lithium	ND		0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 13:06	1
Molybdenum	0.16		0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 13:06	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 13:06	1
Thallium	0.00023	J	0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 13:06	1

Method: EPA 7470A - Mercury	(CVAA)						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND —	0.00020	0.00013 mg/L		11/09/21 06:20	11/15/21 12:31	1

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	430		10	10	mg/L			11/05/21 17:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
PΗ	7.6	HF	0.1	0.1	SU			11/06/21 10:09	1

	Radium-226 ((GFPC)								
		•	Count Uncert.	Total Uncert.						
Analyte	Posult	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
										Diriac
Radium-226	0.113	U	0.170	0.170	1.00	0.289	pCi/L	11/09/21 16:45	12/06/21 10:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.7		40 - 110					11/09/21 16:45	12/06/21 10:27	1

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Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-6S

Lab Sample ID: 180-129535-7 Date Collected: 11/02/21 12:29

Matrix: Water

Date Received: 11/04/21 14:15

Method: 9320 - F	Radium-228 (GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.872		0.461	0.468	1.00	0.680	pCi/L	12/15/21 10:20	12/20/21 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		40 - 110					12/15/21 10:20	12/20/21 14:02	1
Y Carrier	69.2		40 - 110					12/15/21 10:20	12/20/21 14:02	1

Method: 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** 0.491 0.498 5.00 0.680 pCi/L 12/21/21 17:31 0.985 226 + 228

Client Sample ID: WAP-6I Lab Sample ID: 180-129535-8 Date Collected: 11/02/21 13:04 **Matrix: Water**

Date Received: 11/04/21 14:15

Method: EPA 9	056A - Anions, Ion Chroma	atography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27		1.0	0.71	mg/L			11/06/21 00:01	1
Fluoride	0.13		0.10	0.026	mg/L			11/06/21 00:01	1
Sulfate	40		1.0	0.76	mg/L			11/06/21 00:01	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 13:31	1
Arsenic	0.0043		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 13:31	1
Barium	0.15		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 13:31	1
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 13:31	1
Boron	0.11		0.080	0.039	mg/L		11/11/21 11:00	11/13/21 12:45	1
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 13:31	1
Calcium	46		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 13:31	1
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 13:31	1
Cobalt	0.00036	J	0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 13:31	1
Lead	ND		0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 13:31	1
Lithium	0.0040	J	0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 13:31	1
Molybdenum	0.0061		0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 13:31	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 13:31	1
Thallium	0.00034	J	0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 13:31	1

Method: EPA 7470A - Mercu	ıry (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:34	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	270		10	10	mg/L			11/05/21 17:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.8	HF	0.1	0.1	SU			11/06/21 10:13	1

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Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-6I Lab Sample ID: 180-129535-8

Date Collected: 11/02/21 13:04 **Matrix: Water** Date Received: 11/04/21 14:15

Method: 9315 - R	Radium-226 (GFPC)								
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.170	U	0.140	0.141	1.00	0.204	pCi/L	11/09/21 16:45	12/06/21 10:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.7		40 - 110					11/09/21 16:45	12/06/21 10:32	1

Method: 9320 - F	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.71		0.526	0.549	1.00	0.664	pCi/L	12/15/21 10:20	12/20/21 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.6		40 - 110					12/15/21 10:20	12/20/21 14:02	1
Y Carrier	80.7		40 - 110					12/15/21 10:20	12/20/21 14:02	1

Method: Ra226_Ra	228 - Con	nbined Ra	dium-226 a	nd Radiun	n-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.88		0.544	0.567	5.00	0.664	pCi/L		12/21/21 17:31	1

Client Sample ID: WAP-6D Lab Sample ID: 180-129535-9 Date Collected: 11/02/21 15:42 **Matrix: Water** Date Received: 11/04/21 14:15

Method: EPA 9056A -	Anions, Ion Chromatogr	raphy						
Analyte	Result Qual	lifier RL	MDL I	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23	1.0	0.71 r	mg/L			11/06/21 00:19	1
Fluoride	0.13	0.10	0.026 r	mg/L			11/06/21 00:19	1
Sulfate	40	1.0	0.76 r	ma/l			11/06/21 00:19	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 13:35	1
Arsenic	0.0056		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 13:35	1
Barium	0.19		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 13:35	1
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 13:35	1
Boron	0.069	J	0.080	0.039	mg/L		11/11/21 11:00	11/13/21 12:48	1
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 13:35	1
Calcium	41		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 13:35	1
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 13:35	1
Cobalt	ND		0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 13:35	1
Lead	ND		0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 13:35	1
Lithium	ND		0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 13:35	1
Molybdenum	0.0023	J	0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 13:35	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 13:35	1
Thallium	ND		0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 13:35	1

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-6D

Date Collected: 11/02/21 15:42 Date Received: 11/04/21 14:15 Lab Sample ID: 180-129535-9

Matrix: Water

Job ID: 180-129535-1

Method:	EPA	7470A	- Mercury	(CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	210		10	10	mg/L			11/05/21 17:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

Method: 9315 - Radium-226 (GFPC)

		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.216		0.133	0.134	1.00	0.181	pCi/L	11/09/21 16:45	12/06/21 10:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.7		40 - 110					11/09/21 16:45	12/06/21 10:32	1

Method: 9320 - Radium-228 (GEPC)

Wiethou. 3320 - N	(aululii-220 (Gi i C)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.715		0.386	0.392	1.00	0.569	pCi/L	12/15/21 10:20	12/20/21 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.8		40 - 110					12/15/21 10:20	12/20/21 14:02	1
Y Carrier	80.4		40 - 110					12/15/21 10:20	12/20/21 14:02	1

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

			a.a 							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.932		0.408	0.414	5.00	0.569	pCi/L		12/21/21 17:31	1

Lab Sample ID: 180-129535-10 **Client Sample ID: WAP-8S** Date Collected: 11/02/21 09:52 **Matrix: Water** Date Received: 11/04/21 14:15

Welliou. EPA 3036A - A	amons, ion Cinomatography							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85	1.0	0.71	mg/L			11/06/21 00:37	1
Fluoride	0.12	0.10	0.026	mg/L			11/06/21 00:37	1
Sulfate	300	5.0	3.8	ma/L			11/06/21 00:54	5

Method: EPA 6020A - Metals (ICP/	W3) - 10	otai Recover	abie						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 13:39	1
Arsenic	0.016		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 13:39	1
Barium	0.26		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 13:39	1
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 13:39	1
Boron	3.1		0.16	0.077	mg/L		11/11/21 11:00	11/13/21 12:59	2
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 13:39	1

Client Sample ID: WAP-8S

Lab Sample ID: 180-129535-10

Matrix: Water

Job ID: 180-129535-1

Date Collected: 11/02/21 09:52 Date Received: 11/04/21 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	150		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 13:39	1
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 13:39	1
Cobalt	0.00084		0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 13:39	1
Lead	ND		0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 13:39	1
Lithium	0.038		0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 13:39	1
Molybdenum	0.27		0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 13:39	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 13:39	1
	ND ury (CVAA)		0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 13:39	1
Thallium Method: EPA 7470A - Merc Analyte Mercury	ury (CVAA)	Qualifier	0.0010 RL 0.00020	MDL	Unit	<u>D</u>	Prepared 11/09/21 06:20	Analyzed 11/15/21 12:36	Dil Fac
Method: EPA 7470A - Merc Analyte Mercury General Chemistry	ury (CVAA) Result ND	<u> </u>	RL 0.00020	MDL 0.00013	Unit mg/L	— <u> </u>	Prepared 11/09/21 06:20	Analyzed 11/15/21 12:36	1
Method: EPA 7470A - Merc Analyte Mercury General Chemistry Analyte	ury (CVAA) Result ND Result	Qualifier Qualifier		MDL 0.00013	Unit mg/L Unit	<u>D</u>	Prepared	Analyzed 11/15/21 12:36 Analyzed	Dil Fac
Method: EPA 7470A - Merc Analyte Mercury General Chemistry Analyte	ury (CVAA) Result ND	<u> </u>	RL 0.00020	MDL 0.00013	Unit mg/L Unit	— <u> </u>	Prepared 11/09/21 06:20	Analyzed 11/15/21 12:36	1
Method: EPA 7470A - Merc Analyte Mercury General Chemistry	ury (CVAA) Result ND Result 780	<u> </u>		MDL 0.00013 MDL 10	Unit mg/L Unit	— <u> </u>	Prepared 11/09/21 06:20	Analyzed 11/15/21 12:36 Analyzed	1

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.272		0.123	0.125	1.00	0.126	pCi/L	11/09/21 16:45	12/06/21 10:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.4		40 - 110					11/09/21 16:45	12/06/21 10:33	1

Analyte	Posult	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analvzed	Dil Fac
Analyte	Result	Qualifier	(20+/-)	(20+/-)	KL	MIDC	Unit	Prepared	Analyzeu	DII Fac
Radium-228	0.395	U	0.279	0.282	1.00	0.434	pCi/L	12/15/21 10:20	12/20/21 14:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.8		40 - 110					12/15/21 10:20	12/20/21 14:02	1
Y Carrier	80.7		40 - 110					12/15/21 10:20	12/20/21 14:02	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.667		0.305	0.308	5.00	0.434	pCi/L		12/21/21 17:31	1

Client Sample ID: WAP-8I

Date Collected: 11/02/21 10:34

Date Received: 11/04/21 14:15

Lab Sample ID: 180-129535-11

Matrix: Water

Method: EPA 9056A - Anions,	Ion Chromatograp	ohy						
Analyte	Result Qualifie	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23	1.0	0.71	mg/L			11/06/21 01:12	1

Project/Site: CCR Groundwater Monitoring FB Culley

Method: EPA 7470A - Mercury (CVAA)

Client Sample ID: WAP-8I Lab Sample ID: 180-129535-11

Date Collected: 11/02/21 10:34 **Matrix: Water** Date Received: 11/04/21 14:15

Method: EPA 9056A - Anions,	Ion Chromatography (0	Continued)						
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.17	0.10	0.026	mg/L			11/06/21 01:12	1
Sulfate	41	1.0	0.76	mg/L			11/06/21 01:12	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 13:42	
Arsenic	0.0034		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 13:42	•
Barium	0.050		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 13:42	•
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 13:42	
Boron	0.14		0.080	0.039	mg/L		11/11/21 11:00	11/13/21 13:03	•
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 13:42	•
Calcium	45		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 13:42	
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 13:42	
Cobalt	0.00049	J	0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 13:42	
Lead	ND		0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 13:42	
Lithium	ND		0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 13:42	
Molybdenum	0.033		0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 13:42	•
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 13:42	
Thallium	ND		0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 13:42	

Analyte	Result	Qualifier	KL	MDL	Unit	ט	Prepared	Analyzed	DII Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:37	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	270		10	10	mg/L			11/05/21 17:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.8	HF	0.1	0.1	SU			11/06/21 10:18	1

Method: 9315 - R		GFPC)								
	· ·	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.302		0.133	0.135	1.00	0.138	pCi/L	11/09/21 16:45	12/06/21 10:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.4		40 - 110					11/09/21 16:45	12/06/21 10:33	1

Method: 9320 - I	Radium-228 (GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.401	U	0.378	0.380	1.00	0.610	pCi/L	12/15/21 10:20	12/20/21 14:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.5		40 - 110					12/15/21 10:20	12/20/21 14:03	1
Y Carrier	80.0		40 - 110					12/15/21 10:20	12/20/21 14:03	1

Eurofins Pittsburgh

Project/Site: CCR Groundwater Monitoring FB Culley

Lab Sample ID: 180-129535-11 **Client Sample ID: WAP-8I**

Date Collected: 11/02/21 10:34 **Matrix: Water** Date Received: 11/04/21 14:15

Method: Ra226	_Ra228 - Combined Radium-226 and Radium-228
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			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC U	Jnit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.703		0.401	0.403	5.00	0.610 p	oCi/L		12/21/21 17:31	1

Lab Sample ID: 180-129535-12 **Client Sample ID: WAP-8D** Date Collected: 11/02/21 11:30 **Matrix: Water**

Date Received: 11/04/21 14:15

Method: EPA 9056A - A	Anions, Ion Chromatography	<i>,</i>						
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22	1.0	0.71	mg/L			11/06/21 02:06	1
Fluoride	0.14	0.10	0.026	mg/L			11/06/21 02:06	1
Sulfate	45	1.0	0.76	mg/L			11/06/21 02:06	1

Method: EPA 6020A - N Analyte	Result Q		MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND -	0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 13:46	1
Arsenic	0.0026	0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 13:46	1
Barium	0.067	0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 13:46	1
Beryllium	ND	0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 13:46	1
Boron	0.081	0.080	0.039	mg/L		11/11/21 11:00	11/13/21 13:06	1
Cadmium	ND	0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 13:46	1
Calcium	42	0.50	0.13	mg/L		11/11/21 11:00	11/12/21 13:46	1
Chromium	ND	0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 13:46	1
Cobalt	ND	0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 13:46	1
Lead	ND	0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 13:46	1
Lithium	ND	0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 13:46	1
Molybdenum	0.0013 J	0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 13:46	1
Selenium	ND	0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 13:46	1
Thallium	ND	0.0010	0.00015	ma/l		11/11/21 11:00	11/12/21 13:46	1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:40	1

General Chemistry

Analyte	Result	Qualifier	KL	MDL	Unit	U	Prepared	Anaiyzed	DII Fac
Total Dissolved Solids	210		10	10	mg/L			11/05/21 17:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

Method: 9315 - Radium-226 (GFPC)

Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Radium-226	0.304		0.133	0.136	1.00	0.142	pCi/L	11/09/21 16:45	12/06/21 10:33	1
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			Count	iotai						

Ba Carrier 97.5 40 - 110 <u>11/09/21 16:45</u> <u>12/06/21 10:33</u>

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-8D

Lab Sample ID: 180-129535-12

Matrix: Water

Date Collected: 11/02/21 11:30 Date Received: 11/04/21 14:15

Method:	9320 -	Radium-228	(GFPC)

Welliou. 9320 - Ka	ululli-220 (GFFC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.356	U	0.424	0.425	1.00	0.699	pCi/L	12/15/21 10:20	12/20/21 14:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.1		40 - 110					12/15/21 10:20	12/20/21 14:03	1
Y Carrier	78.1		40 - 110					12/15/21 10:20	12/20/21 14:03	1

Method: 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	0.660	U	0.444	0.446	5.00	0.699	pCi/L		12/21/21 17:31	1

Client Sample ID: WAP-9S Lab Sample ID: 180-129535-13

Date Collected: 11/02/21 15:42 **Matrix: Water**

Date Received: 11/04/21 14:15

Method: EPA 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27		1.0	0.71	mg/L			11/06/21 02:24	1
Fluoride	0.84		0.10	0.026	mg/L			11/06/21 02:24	1
Sulfate	55		1.0	0.76	mg/L			11/06/21 02:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 13:49	1
Arsenic	0.0034		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 13:49	1
Barium	0.12		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 13:49	1
Beryllium	0.00023	J	0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 13:49	1
Boron	1.6		0.080	0.039	mg/L		11/11/21 11:00	11/13/21 13:10	1
Cadmium	0.00035	J	0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 13:49	1
Calcium	82		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 13:49	1
Chromium	0.0065		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 13:49	1
Cobalt	0.0041		0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 13:49	1
Lead	0.0044		0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 13:49	1
Lithium	0.015		0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 13:49	1
Molybdenum	0.15		0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 13:49	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 13:49	1
Thallium	0.00019	J	0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 13:49	1

Method:	FΡΔ	7470A	- Mercury	(CVAA)
Metriou.	EFA	. / 4/ UM	IVIELCULV	/ ICVAAI

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:41	1

Genera	Chen	าistry
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids	370		10	10	mg/L			11/05/21 17:30	1	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac	
pH	7.8	HF	0.1	0.1	SU			11/06/21 10:21	1	

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-9S

Lab Sample ID: 180-129535-13

Matrix: Water

Date Collected: 11/02/21 15:42 Date Received: 11/04/21 14:15

Method: 9315 - Ra	dium-226 (GFPC)								
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.487		0.251	0.255	1.00	0.298	pCi/L	11/09/21 16:45	12/06/21 10:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.2		40 - 110					11/09/21 16:45	12/06/21 10:33	1

Analyte	Posult	Qualifier	Count Uncert. (2σ+/-)	Total Uncert.	RL	MDC	Unit	Prepared	Analyzod	Dil Fac
	Result	Qualifier	(20+/-)	(2σ+/-)	KL_	MIDC	Unit	Prepared	Analyzed	DII Fac
Radium-228	-0.162	UG	0.542	0.542	1.00	1.01	pCi/L	12/15/21 10:20	12/20/21 14:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.1		40 - 110					12/15/21 10:20	12/20/21 14:03	1
Y Carrier	81.5		40 - 110					12/15/21 10:20	12/20/21 14:03	1

Method: Ra226_Ra2	228 - Con	nbined Ra	dium-226 a	nd Radium	1-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.325	U	0.597	0.599	5.00	1.01	pCi/L		12/21/21 17:31	1

Client Sample ID: WAP-9I

Date Collected: 11/03/21 07:50

Matrix: Water

Date Received: 11/04/21 14:15

Method: EPA 9056A -	Anions, Ion Chromatography							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24	1.0	0.71	mg/L			11/06/21 03:00	1
Fluoride	0.21	0.10	0.026	mg/L			11/06/21 03:00	1
Sulfate	32	1.0	0.76	mg/L			11/06/21 03:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00057	J	0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 14:00	1
Arsenic	0.0049		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 14:00	1
Barium	0.089		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 14:00	1
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 14:00	1
Boron	0.22		0.080	0.039	mg/L		11/11/21 11:00	11/13/21 13:14	1
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 14:00	1
Calcium	47		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 14:00	1
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 14:00	1
Cobalt	0.00031	J	0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 14:00	1
Lead	0.00014	J	0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 14:00	1
Lithium	0.0038	J	0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 14:00	1
Molybdenum	0.018		0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 14:00	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 14:00	1
Thallium	ND		0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 14:00	1

Client Sample ID: WAP-9I

Lab Sample ID: 180-129535-14

Matrix: Water

Job ID: 180-129535-1

Date Collected: 11/03/21 07:50 Date Received: 11/04/21 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:42	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	230		10	10	mg/L			11/08/21 17:13	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.6	HE	0.1	0.1	SU			11/06/21 10:24	1

Method: 9315 -	Radium-226 ((GFPC)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.198	U	0.143	0.145	1.00	0.200	pCi/L	11/09/21 16:45	12/06/21 10:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.7		40 - 110					11/09/21 16:45	12/06/21 10:34	1

- Method: 9320 - R	adium-228 (GFPC)								
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.854		0.453	0.460	1.00	0.681	pCi/L	12/15/21 10:20	12/20/21 14:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		40 - 110					12/15/21 10:20	12/20/21 14:03	1
Y Carrier	82.2		40 - 110					12/15/21 10:20	12/20/21 14:03	1

Method: Ra226_Ra	228 - Con	bined Rad	dium-226 a	nd Radiun	n-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.05		0.475	0.482	5.00	0.681	pCi/L		12/21/21 17:31	1

Client Sample ID: WAP-9D

Date Collected: 11/03/21 08:30

Date Received: 11/04/21 14:15

Lab Sample ID: 180-129535-15

Matrix: Water

Method: EPA 9056A	- Anions, Ion Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17		1.0	0.71	mg/L			11/06/21 03:17	1
Fluoride	0.31		0.10	0.026	mg/L			11/06/21 03:17	1
Sulfate	36		1.0	0.76	mg/L			11/06/21 03:17	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0012	J	0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 14:04	1
Arsenic	0.0014		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 14:04	1
Barium	0.12		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 14:04	1
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 14:04	1
Boron	0.15		0.080	0.039	mg/L		11/11/21 11:00	11/13/21 13:17	1
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 14:04	1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-9D Date Collected: 11/03/21 08:30

Lab Sample ID: 180-129535-15

Matrix: Water

Job ID: 180-129535-1

Date Received: 11/04/21 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	37		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 14:04	1
Chromium	0.0017	J	0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 14:04	1
Cobalt	0.00025	J	0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 14:04	1
Lead	0.00032	J	0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 14:04	1
Lithium	0.0038	J	0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 14:04	1
Molybdenum	0.0035	J	0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 14:04	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 14:04	1
Thallium	ND		0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 14:04	1
: Method: EPA 7470A - Merc	urv (CVAA)								
Method: EPA 7470A - Merc Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
	• •	Qualifier	RL 0.00020	MDL 0.00013		<u>D</u>	Prepared 11/09/21 06:20	Analyzed 11/15/21 12:43	Dil Fac
Analyte Mercury	Result	Qualifier				<u>D</u>			Dil Fac
Analyte	Result ND	Qualifier		0.00013		<u>D</u>			Dil Fac
Analyte Mercury General Chemistry	Result ND	<u> </u>	0.00020	0.00013	mg/L	=	11/09/21 06:20	11/15/21 12:43	1
Analyte Mercury General Chemistry Analyte	Result ND Result 200	<u> </u>	0.00020	0.00013 MDL 10	mg/L Unit	=	11/09/21 06:20	11/15/21 12:43 Analyzed	1

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.233		0.146	0.148	1.00	0.191	pCi/L	11/09/21 16:45	12/06/21 10:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					11/09/21 16:45	12/06/21 10:34	1

Method: 9320 -	Radium-228 ((GFPC)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.320	U	0.333	0.334	1.00	0.542	pCi/L	12/15/21 10:20	12/20/21 14:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		40 - 110					12/15/21 10:20	12/20/21 14:04	1
Y Carrier	81.1		40 - 110					12/15/21 10:20	12/20/21 14:04	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.553		0.364	0.365	5.00	0.542	pCi/L		12/21/21 17:31	1

Client Sample ID: FB-1

Date Collected: 11/01/21 14:12

Date Received: 11/04/21 14:15

Lab Sample ID: 180-129535-16

Matrix: Water

Method: EPA 9056A - Anions,	Ion Chromatography						
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND —	1.0	0.71 mg/L			11/06/21 03:35	1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: FB-1 Lab Sample ID: 180-129535-16

Date Collected: 11/01/21 14:12 Matrix: Water
Date Received: 11/04/21 14:15

Method: EPA 9056A - Anions, Ion Chromatography (Continued)										
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Fluoride	ND ND	0.10	0.026	mg/L			11/06/21 03:35	1		
Sulfate	ND	1.0	0.76	mg/L			11/06/21 03:35	1		

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 14:07	1
Arsenic	ND		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 14:07	1
Barium	ND		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 14:07	1
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 14:07	1
Boron	0.042	J	0.080	0.039	mg/L		11/11/21 11:00	11/13/21 13:21	1
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 14:07	1
Calcium	ND		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 14:07	1
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 14:07	1
Cobalt	ND		0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 14:07	1
Lead	ND		0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 14:07	1
Lithium	ND		0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 14:07	1
Molybdenum	ND		0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 14:07	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 14:07	1
Thallium	ND		0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 14:07	1

Method: EPA /4/UA - Merci	ury (CVAA)							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND	0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:44	1
General Chemistry Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Nesult Qualifier		14100	O		i icpaica	Allulyzou	D

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			11/05/21 17:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.0	HF	0.1	0.1	SU			11/06/21 10:29	1

Method: 9315 - R	Radium-226 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.143	U	0.104	0.105	1.00	0.145	pCi/L	11/09/21 16:45	12/06/21 10:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.7		40 - 110					11/09/21 16:45	12/06/21 10:34	1

Method: 9320 - I		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.232	U	0.308	0.308	1.00	0.513	pCi/L	12/15/21 10:20	12/20/21 14:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					12/15/21 10:20	12/20/21 14:04	1
Y Carrier	80.7		40 - 110					12/15/21 10:20	12/20/21 14:04	1

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Project/Site: CCR Groundwater Monitoring FB Culley

Thallium

Client Sample ID: FB-1 Lab Sample ID: 180-129535-16

Date Collected: 11/01/21 14:12 Matrix: Water
Date Received: 11/04/21 14:15

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.375	U	0.325	0.325	5.00	0.513	pCi/L		12/21/21 17:31	1

Client Sample ID: DUP-1 Lab Sample ID: 180-129535-17

Date Collected: 11/01/21 00:00 Matrix: Water Date Received: 11/04/21 14:15

Method: EPA 9056A - Anions, Ion Chromatography										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	140		1.0	0.71	mg/L			11/06/21 03:53	1
	Fluoride	0.086	J	0.10	0.026	mg/L			11/06/21 03:53	1
	Sulfate	420		10	7.6	mg/L			11/06/21 04:11	10
	_									

Method: EPA 9056A - Anions, Ion Chromatography - RA											
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Chloride	140	H	1.0	0.71	mg/L			12/09/21 09:07	1	
	Fluoride	0.18	H	0.10	0.026	mg/L			12/09/21 09:07	1	
	Sulfate	410	Н	10	7.6	mg/L			12/09/21 09:21	10	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 14:11	1
Arsenic	0.00037	J	0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 14:11	1
Barium	0.048		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 14:11	1
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 14:11	1
Boron	4.6		0.16	0.077	mg/L		11/11/21 11:00	11/13/21 13:25	2
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 14:11	1
Calcium	250		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 14:11	1
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 14:11	1
Cobalt	0.0076		0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 14:11	1
Lead	ND		0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 14:11	1
Lithium	ND		0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 14:11	1
Molybdenum	0.00069	J	0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 14:11	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 14:11	1

Method: EPA 7470A - Mercury (CVAA)							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:45	1
Conoral Chemietre								

0.0010

0.00015 mg/L

ND

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10	10	mg/L		-	11/05/21 17:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.9	HF	0.1	0.1	SU			11/06/21 10:31	1

11/11/21 11:00 11/12/21 14:11

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Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: DUP-1 Lab Sample ID: 180-129535-17

Date Collected: 11/01/21 00:00 **Matrix: Water** Date Received: 11/04/21 14:15

Method: 9315 - F	Kadium-226 ((GFPC)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.323	·	0.168	0.170	1.00	0.221	pCi/L	11/09/21 16:45	12/06/21 10:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.1		40 - 110					11/09/21 16:45	12/06/21 10:31	1

Method: 9320 - I	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.162	U	0.258	0.258	1.00	0.435	pCi/L	12/15/21 10:20	12/20/21 13:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.0		40 - 110					12/15/21 10:20	12/20/21 13:58	1
Y Carrier	78.1		40 - 110					12/15/21 10:20	12/20/21 13:58	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.485		0.308	0.309	5.00	0.435	pCi/L		12/21/21 17:31	1

Client Sample ID: DUP-2 Lab Sample ID: 180-129535-18 Date Collected: 11/02/21 00:00 **Matrix: Water** Date Received: 11/04/21 14:15

Method: EPA 9056A	- Anions, Ion Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	86		1.0	0.71	mg/L			11/06/21 04:29	1
Fluoride	0.11		0.10	0.026	mg/L			11/06/21 04:29	1
Sulfate	300		5.0	3.8	ma/l			11/06/21 04:47	5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 14:15	1
Arsenic	0.016		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 14:15	1
Barium	0.26		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 14:15	1
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 14:15	1
Boron	3.1		0.16	0.077	mg/L		11/11/21 11:00	11/13/21 13:36	2
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 14:15	1
Calcium	150		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 14:15	1
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 14:15	1
Cobalt	0.00071		0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 14:15	1
Lead	ND		0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 14:15	1
Lithium	0.038		0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 14:15	1
Molybdenum	0.28		0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 14:15	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 14:15	1
Thallium	ND		0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 14:15	1

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Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: DUP-2 Lab Sample ID: 180-129535-18

Date Collected: 11/02/21 00:00 Matrix: Water
Date Received: 11/04/21 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/21 06:20	11/15/21 12:46	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	780		10	10	mg/L			11/05/21 17:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7 9	HE	0.1	0.1	SU			11/06/21 10:33	1

Method: 9315 - R	adium-226 (GFPC)								
	·	•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.521		0.208	0.213	1.00	0.237	pCi/L	11/09/21 16:45	12/06/21 10:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.2		40 - 110					11/09/21 16:45	12/06/21 10:31	1

Method: 9320 - I	Radium-228 ((GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.118	U	0.248	0.248	1.00	0.425	pCi/L	12/15/21 10:20	12/20/21 13:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.8		40 - 110					12/15/21 10:20	12/20/21 13:58	1
Y Carrier	79.6		40 - 110					12/15/21 10:20	12/20/21 13:58	1

Method: Ra226_Ra	228 - Con	bined Rad	dium-226 a	nd Radiun	1-228					
_			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.639		0.324	0.327	5.00	0.425	pCi/L		12/21/21 17:31	1

Client Sample ID: WAP-3S

Date Collected: 11/03/21 09:12

Date Received: 11/04/21 14:15

Lab Sample ID: 180-129535-19

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography										
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	34	1.0	0.71	mg/L			11/06/21 05:40	1		
Fluoride	0.67	0.10	0.026	mg/L			11/06/21 05:40	1		
Sulfate	120	1.0	0.76	mg/L			11/06/21 05:40	1		

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable									
Analyte	Result Q	Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Antimony	ND ND	0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 14:18	1	
Arsenic	0.00065 J	0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 14:18	1	
Barium	0.027	0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 14:18	1	
Beryllium	ND	0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 14:18	1	
Boron	4.7	0.16	0.077	mg/L		11/11/21 11:00	11/13/21 13:46	2	
Cadmium	ND	0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 14:18	1	

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Client Sample ID: WAP-3S

Lab Sample ID: 180-129535-19

Matrix: Water

Job ID: 180-129535-1

Date Collected: 11/03/21 09:12 Date Received: 11/04/21 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	94		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 14:18	1
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 14:18	1
Cobalt	0.0011		0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 14:18	1
Lead	0.00037	J	0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 14:18	1
Lithium	0.077		0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 14:18	1
Molybdenum	0.95		0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 14:18	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 14:18	1
	ND ury (CVAA)		0.0010	0.00015	mg/L		11/11/21 11:00	11/12/21 14:18	1
: Method: EPA 7470A - Merc	ury (CVAA)				Ü				1
Thallium Method: EPA 7470A - Merc Analyte Mercury	ury (CVAA) Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: EPA 7470A - Merc Analyte	ury (CVAA)	Qualifier			Unit	<u>D</u>			Dil Fac
Method: EPA 7470A - Merc Analyte Mercury	ury (CVAA) Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: EPA 7470A - Merc Analyte Mercury General Chemistry	ury (CVAA) Result ND	Qualifier	RL	MDL 0.00013	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: EPA 7470A - Merc Analyte Mercury General Chemistry Analyte	ury (CVAA) Result ND	<u> </u>	RL	MDL 0.00013	Unit mg/L		Prepared 11/09/21 06:20	Analyzed 11/15/21 12:47	1
: Method: EPA 7470A - Merc	rury (CVAA) Result ND Result 410	<u> </u>		MDL 0.00013	Unit mg/L Unit mg/L		Prepared 11/09/21 06:20	Analyzed 11/15/21 12:47 Analyzed	1

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.809		0.252	0.262	1.00	0.255	pCi/L	11/09/21 16:45	12/06/21 10:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.2		40 - 110					11/09/21 16:45	12/06/21 10:35	

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analvzed	Dil Fac
Radium-228	0.270		0.309	0.310	1.00	0.508		12/15/21 10:20	12/20/21 13:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.0		40 - 110					12/15/21 10:20	12/20/21 13:58	1
Y Carrier	82.2		40 - 110					12/15/21 10:20	12/20/21 13:58	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.08		0.399	0.406	5.00	0.508	pCi/L		12/21/21 17:31	1

Client Sample ID: WAP-3D

Date Collected: 11/03/21 09:54

Date Received: 11/04/21 14:15

Lab Sample ID: 180-129535-20

Matrix: Water

Method: EPA 9056A - Anions,	Ion Chromatography							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36	1.0	0.71	mg/L			11/06/21 06:16	1

Project/Site: CCR Groundwater Monitoring FB Culley

%Yield Qualifier

97.3

80.7

Limits

40 - 110

40 - 110

Carrier

Ba Carrier

Y Carrier

Client Sample ID: WAP-3D Lab Sample ID: 180-129535-20

Date Collected: 11/03/21 09:54

Date Received: 11/04/21 14:15

Matrix: Water

Analyte		Result	Qualifier	RL	MDL	Unit		D	Prepared	Analyzed	Dil F
Fluoride		0.44		0.10	0.026	mg/L				11/06/21 06:16	
Sulfate		ND		1.0	0.76	mg/L	-			11/06/21 06:16	
Method: EPA 6020A	- Metals	(ICP/MS) - To	otal Reco	verable							
Analyte		Result	Qualifier	RL	MDL	Unit		D	Prepared	Analyzed	Dil F
Antimony		ND		0.0020	0.00038	mg/L	-	_	11/11/21 11:00	11/12/21 14:22	
Arsenic		ND		0.0010	0.00031	mg/L			11/11/21 11:00	11/12/21 14:22	
Barium		0.012		0.010	0.0016	mg/L	-		11/11/21 11:00	11/12/21 14:22	
Beryllium		ND		0.0010	0.00018	mg/L			11/11/21 11:00	11/12/21 14:22	
Boron		4.3		0.16	0.077	mg/L	-		11/11/21 11:00	11/13/21 13:57	
Cadmium		ND		0.0010	0.00022	mg/L			11/11/21 11:00	11/12/21 14:22	
Calcium		100		0.50	0.13	mg/L			11/11/21 11:00	11/12/21 14:22	
Chromium		ND		0.0020	0.0015	mg/L	<u>.</u>		11/11/21 11:00	11/12/21 14:22	
Cobalt		0.00075		0.00050	0.00013	mg/L			11/11/21 11:00	11/12/21 14:22	
_ead		ND		0.0010	0.00013	mg/L			11/11/21 11:00	11/12/21 14:22	
_ithium		0.073		0.0050	0.0034	mg/L			11/11/21 11:00	11/12/21 14:22	
Molybdenum		0.44		0.0050	0.00061	mg/L			11/11/21 11:00	11/12/21 14:22	
Selenium		ND		0.0050	0.0015	mg/L			11/11/21 11:00	11/12/21 14:22	
Гhallium		ND		0.0010	0.00015	•			11/11/21 11:00	11/12/21 14:22	
nalyte	- Mercur	Result	Qualifier	RL		Unit		D	Prepared	Analyzed	Dil
Analyte	- Mercur	• • •	Qualifier		MDL 0.00013			<u>D</u>	Prepared 11/09/21 06:20	Analyzed 11/15/21 12:49	Dil
Analyte Mercury General Chemistry	- Mercur	Result ND	·	0.00020	0.00013	mg/L	-	_	11/09/21 06:20	11/15/21 12:49	
Analyte Mercury General Chemistry Analyte	- Mercur	Result ND Result	Qualifier Qualifier	0.00020	0.00013	mg/L		D D		11/15/21 12:49 Analyzed	
Analyte Mercury General Chemistry Analyte Total Dissolved Solids	- Mercur	Result ND Result 480	Qualifier	0.00020 RL 10	0.00013 MDL 10	mg/L		_ <u>D</u>	11/09/21 06:20 Prepared	11/15/21 12:49 Analyzed 11/08/21 17:25	Dil
Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte	- Mercur	Result ND Result 480 Result	·	0.00020	0.00013 MDL 10 RL	mg/L		_	11/09/21 06:20	11/15/21 12:49 Analyzed	Dil Dil
Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte DH		Result 480 Result 7.7	Qualifier Qualifier	0.00020 RL 10 RL	0.00013 MDL 10 RL	mg/L Unit mg/L Unit		_ <u>D</u>	11/09/21 06:20 Prepared	11/15/21 12:49 Analyzed 11/08/21 17:25 Analyzed	Dil
Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte DH		Result 480 Result 7.7	Qualifier Qualifier HF	0.00020 RL 10 RL 0.1	0.00013 MDL 10 RL	mg/L Unit mg/L Unit		_ <u>D</u>	11/09/21 06:20 Prepared	11/15/21 12:49 Analyzed 11/08/21 17:25 Analyzed	Dil
Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte DH		Result 480 Result 7.7	Qualifier Qualifier HF Count	0.00020 RL 10 RL 0.1	0.00013 MDL 10 RL	mg/L Unit mg/L Unit		_ <u>D</u>	11/09/21 06:20 Prepared	11/15/21 12:49 Analyzed 11/08/21 17:25 Analyzed	Dil
Analyte Mercury General Chemistry Analyte Fotal Dissolved Solids Analyte DH Method: 9315 - Radiu	um-226 (Result 480 Result 7.7 GFPC)	Qualifier Qualifier HF 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	Analyzed 11/08/21 17:25 Analyzed 11/06/21 08:22	Dil
Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte DH Method: 9315 - Radiu Analyte	um-226 (Result 480 Result 7.7	Qualifier Qualifier HF Count	0.00020 RL 10 RL 0.1	0.00013 MDL 10 RL 0.1	mg/L Unit mg/L Unit	Unit	_ <u>D</u>	Prepared Prepared Prepared	11/15/21 12:49 Analyzed 11/08/21 17:25 Analyzed	Dil
Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte DH Method: 9315 - Radiu Analyte Radium-226	um-226 (Result 0.714	Result ND Result 480 Result 7.7 GFPC)	Qualifier HF Count Uncert. (20+/-) 0.241	0.00020 RL 10 RL 0.1 Total Uncert. (2σ+/-)	0.00013 MDL 10 RL 0.1	mg/L Unit mg/L Unit SU	Unit	_ <u>D</u>	Prepared Prepared 11/09/21 16:45	Analyzed 11/06/21 10:36 Analyzed 11/06/21 10:36	Dil Dil
Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte OH Method: 9315 - Radiu Analyte Radium-226 Carrier	um-226 (Result 0.714 %Yield	Result 480 Result 7.7 GFPC)	Qualifier HF Count Uncert. (20+/-) 0.241 Limits	0.00020 RL 10 RL 0.1 Total Uncert. (2σ+/-)	0.00013 MDL 10 RL 0.1	mg/L Unit mg/L Unit SU	Unit	_ <u>D</u>	Prepared Prepared 11/09/21 06:20 Prepared 11/09/21 16:45 Prepared	Analyzed Analyzed 11/06/21 08:22 Analyzed 12/06/21 10:36 Analyzed	Dil Dil
Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte OH Method: 9315 - Radiu Analyte Radium-226 Carrier Ba Carrier	wm-226 (Result 0.714 %Yield 97.0	Result ND Result 480 Result 7.7 GFPC) Qualifier	Qualifier HF Count Uncert. (20+/-) 0.241	0.00020 RL 10 RL 0.1 Total Uncert. (2σ+/-)	0.00013 MDL 10 RL 0.1	mg/L Unit mg/L Unit SU	Unit	_ <u>D</u>	Prepared Prepared 11/09/21 06:20 Prepared 11/09/21 16:45 Prepared	Analyzed 11/06/21 10:36 Analyzed 11/06/21 10:36	Dil Dil
Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte OH Method: 9315 - Radiu Analyte Radium-226 Carrier Ba Carrier	wm-226 (Result 0.714 %Yield 97.0	Result ND Result 480 Result 7.7 GFPC) Qualifier	Qualifier HF Count Uncert. (2σ+/-) 0.241 Limits 40 - 110	0.00020 RL 10 RL 0.1 Total Uncert. (2σ+/-) 0.249	0.00013 MDL 10 RL 0.1	mg/L Unit mg/L Unit SU	Unit	_ <u>D</u>	Prepared Prepared 11/09/21 06:20 Prepared 11/09/21 16:45 Prepared	Analyzed Analyzed 11/06/21 08:22 Analyzed 12/06/21 10:36 Analyzed	Dil Dil
Method: EPA 7470A Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte DH Method: 9315 - Radiu Analyte Radium-226 Carrier Ba Carrier Method: 9320 - Radiu	wm-226 (Result 0.714 %Yield 97.0	Result ND Result 480 Result 7.7 GFPC) Qualifier	Qualifier HF Count Uncert. (2σ+/-) 0.241 Limits 40 - 110 Count	0.00020 RL 10 RL 0.1 Total Uncert. (2σ+/-) 0.249	0.00013 MDL 10 RL 0.1	mg/L Unit mg/L Unit SU	Unit	_ <u>D</u>	Prepared Prepared 11/09/21 06:20 Prepared 11/09/21 16:45 Prepared	Analyzed Analyzed 11/06/21 08:22 Analyzed 12/06/21 10:36 Analyzed	Dil Dil
Analyte Mercury General Chemistry Analyte Total Dissolved Solids Analyte OH Method: 9315 - Radiu Analyte Radium-226 Carrier Ba Carrier	Result 0.714 %Yield 97.0	Result ND Result 480 Result 7.7 GFPC) Qualifier	Qualifier HF Count Uncert. (2σ+/-) 0.241 Limits 40 - 110	0.00020 RL 10 RL 0.1 Total Uncert. (2σ+/-) 0.249	0.00013 MDL 10 RL 0.1 RL 1.00 0	mg/L Unit mg/L Unit SU	Unit_pCi/L	_ <u>D</u>	Prepared Prepared 11/09/21 06:20 Prepared 11/09/21 16:45 Prepared	Analyzed Analyzed 11/06/21 08:22 Analyzed 12/06/21 10:36 Analyzed	Dil

1/7/2022

Dil Fac

1

Analyzed

Prepared

<u>12/15/21 10:20</u> <u>12/20/21 13:59</u>

12/15/21 10:20 12/20/21 13:59

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<u>.</u>

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1

Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-3D Lab Sample ID: 180-129535-20

Date Collected: 11/03/21 09:54 Matrix: Water Date Received: 11/04/21 14:15

Mictiloa. Mazzo_Maz		ibilica ita	alaili LL O d	na radian						
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.927		0.344	0.351	5.00	0.405	pCi/L		12/21/21 17:31	1
226 + 228										

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13

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-377720/55

Matrix: Water

Analysis Batch: 377720

Client Sample ID: Method Blank

Prep Type: Total/NA

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Chloride 0.71 mg/L ND 1.0 11/05/21 22:49 Fluoride ND 0.10 0.026 mg/L 11/05/21 22:49 Sulfate ND 1.0 0.76 mg/L 11/05/21 22:49

Lab Sample ID: MB 180-377720/7

Matrix: Water

Analysis Batch: 377720

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

MB MB Result Qualifier Analyte RL **MDL** Unit D **Prepared** Analyzed Dil Fac 0.71 mg/L Chloride ND 1.0 11/05/21 08:06 Fluoride ND 0.10 0.026 mg/L 11/05/21 08:06 0.76 mg/L Sulfate ND 11/05/21 08:06 1.0

Lab Sample ID: LCS 180-377720/54

Matrix: Water

Analysis Batch: 377720

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

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	47.6		mg/L		95	80 - 120	
Fluoride	2.50	2.33		mg/L		93	80 - 120	
Sulfate	50.0	46.9		mg/L		94	80 - 120	

Lab Sample ID: LCS 180-377720/6

Matrix: Water

Analysis Batch: 377720

7 mary old Batom of 11 20								
-	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	 50.0	49.4		mg/L		99	80 - 120	
Fluoride	2.50	2.39		mg/L		96	80 - 120	
Sulfate	50.0	48.1		mg/L		96	80 - 120	

Lab Sample ID: 180-129535	-5 MS		Client Sample ID: WAP-5I	
Matrix: Water	Prep Type: Total/NA			
Analysis Batch: 377720				
-	Sample Sample	Snike	MS MS	%Rec

	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	28		50.0	75.3		mg/L		95	80 - 120		_
Fluoride	0.12		2.50	2.61		mg/L		100	80 - 120		
Sulfate	47		50.0	94.1		mg/L		93	80 - 120		

Lab Sample ID: 180-129535-5 MSD

Matrix: Water

Analysis Batch: 377720

Alialysis Datell. 311120											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	28		50.0	80.8		mg/L		106	80 - 120	7	15
Fluoride	0.12		2.50	2.81		mg/L		108	80 - 120	7	15
Sulfate	47		50.0	101		mg/L		107	80 - 120	7	15

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Client Sample ID: WAP-5I

Prep Type: Total/NA

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Job ID: 180-129535-1

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

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

Lab Sample ID: 180-129535-7 MS

Matrix: Water

Analysis Batch: 377720

Client Sample ID: WAP-6S Prep Type: Total/NA

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits Chloride 34 250 305 mg/L 108 80 - 120 Fluoride 0.34 J 12.5 13.9 mg/L 109 80 - 120 Sulfate 100 250 375 mg/L 109 80 - 120

Lab Sample ID: 180-129535-7 MSD

Matrix: Water

Analysis Batch: 377720

Client Sample ID: WAP-6S Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	34		250	290		mg/L		102	80 - 120	5	15
Fluoride	0.34	J	12.5	13.3		mg/L		103	80 - 120	5	15
Sulfate	100		250	356		mg/L		101	80 - 120	5	15

Lab Sample ID: MB 180-381392/33

Matrix: Water

Analysis Batch: 381392

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

MB MB Result Qualifier RL Dil Fac Analyte **MDL** Unit D Prepared Analyzed Chloride ND 1.0 0.71 mg/L 12/08/21 23:57 Fluoride ND 0.10 0.026 mg/L 12/08/21 23:57 Sulfate ND 0.76 mg/L 12/08/21 23:57 1.0

Lab Sample ID: LCS 180-381392/32

Matrix: Water

Analysis Batch: 381392

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	49.9		mg/L		100	80 - 120	
Fluoride	2.50	2.59		mg/L		103	80 - 120	
Sulfate	50.0	49.6		mg/L		99	80 - 120	

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

Lab Sample ID: MB 180-378429/1-A

Matrix: Water

Analysis Batch: 378827

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

Prep Batch: 378429

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/11/21 11:00	11/12/21 12:59	1
Arsenic	ND		0.0010	0.00031	mg/L		11/11/21 11:00	11/12/21 12:59	1
Barium	ND		0.010	0.0016	mg/L		11/11/21 11:00	11/12/21 12:59	1
Beryllium	ND		0.0010	0.00018	mg/L		11/11/21 11:00	11/12/21 12:59	1
Cadmium	ND		0.0010	0.00022	mg/L		11/11/21 11:00	11/12/21 12:59	1
Calcium	ND		0.50	0.13	mg/L		11/11/21 11:00	11/12/21 12:59	1
Chromium	ND		0.0020	0.0015	mg/L		11/11/21 11:00	11/12/21 12:59	1
Cobalt	ND		0.00050	0.00013	mg/L		11/11/21 11:00	11/12/21 12:59	1
Lead	ND		0.0010	0.00013	mg/L		11/11/21 11:00	11/12/21 12:59	1
Lithium	ND		0.0050	0.0034	mg/L		11/11/21 11:00	11/12/21 12:59	1
Molybdenum	ND		0.0050	0.00061	mg/L		11/11/21 11:00	11/12/21 12:59	1
Selenium	ND		0.0050	0.0015	mg/L		11/11/21 11:00	11/12/21 12:59	1

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Client: Haley & Aldrich, Inc.

MB MB

Project/Site: CCR Groundwater Monitoring FB Culley

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

Matrix: Water

Analysis Batch: 378827

Analysis Batch: 378981

Lab Sample ID: MB 180-378429/1-A

Client Sample ID: Method Blank Prep Type: Total Recoverable

Job ID: 180-129535-1

Prep Batch: 378429

Prep Batch: 378429

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Thallium ND 0.0010 0.00015 mg/L 11/11/21 11:00 11/12/21 12:59

Lab Sample ID: MB 180-378429/1-A **Client Sample ID: Method Blank Matrix: Water Prep Type: Total Recoverable**

MB MB

mg/L

105

80 - 120

Analyte Result Qualifier RL **MDL** Unit D Analyzed Dil Fac Prepared 0.080 0.039 mg/L 11/11/21 11:00 11/13/21 11:35 Boron ND

Lab Sample ID: LCS 180-378429/2-A Client Sample ID: Lab Control Sample **Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 378827 Prep Batch: 378429

Spike LCS LCS %Rec. Added Limits **Analyte** Result Qualifier Unit %Rec D Antimony 0.250 0.236 mg/L 94 80 - 120 Arsenic 1.00 0.990 mg/L 99 80 _ 120 0.993 Barium 1.00 mg/L 99 80 - 120 Beryllium 0.500 0.460 mg/L 92 80 - 120 Cadmium 0.500 0.500 mg/L 100 80 - 120 Calcium 25.0 26.6 mg/L 106 80 - 120 Chromium 0.500 0.493 99 80 - 120 mg/L Cobalt 0.507 101 80 - 120 0.500 mg/L Lead 0.500 0.498 mg/L 100 80 - 120 0.500 0.454 91 80 - 120 Lithium mg/L Molybdenum 0.500 0.502 mg/L 100 80 - 120 Selenium 1.00 0.991 mg/L 99 80 - 120

Lab Sample ID: LCS 180-378429/2-A **Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total Recoverable**

1.00

Analysis Batch: 378981

Thallium

Prep Batch: 378429 LCS LCS Spike %Rec. Added Analyte Result Qualifier Unit %Rec Limits Boron 1.25 1.15 mg/L 92 80 - 120

Lab Sample ID: 180-129535-7 MS Client Sample ID: WAP-6S

Matrix: Water Prep Type: Total Recoverable

Analysis Batch: 378827 Prep Batch: 378429

1.05

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	ND		0.250	0.240		mg/L		96	75 - 125	
Arsenic	0.0010		1.00	1.04		mg/L		104	75 - 125	
Barium	0.042		1.00	1.07		mg/L		103	75 - 125	
Beryllium	ND		0.500	0.481		mg/L		96	75 - 125	
Cadmium	ND		0.500	0.514		mg/L		103	75 - 125	
Calcium	89		25.0	111		mg/L		90	75 - 125	
Chromium	ND		0.500	0.504		mg/L		101	75 - 125	
Cobalt	0.00092		0.500	0.524		mg/L		105	75 - 125	
Lead	0.00018	J	0.500	0.516		mg/L		103	75 - 125	
Lithium	ND		0.500	0.471		mg/L		94	75 - 125	

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Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

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

Lab Sample ID: 180-129535-7 MS **Matrix: Water**

Analysis Batch: 378827

Client: Haley & Aldrich, Inc.

Client Sample ID: WAP-6S Prep Type: Total Recoverable Prep Batch: 378429

•	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Molybdenum	0.16		0.500	0.689		mg/L		106	75 - 125	
Selenium	ND		1.00	1.02		mg/L		102	75 - 125	
Thallium	0.00023	J	1.00	1.11		mg/L		111	75 - 125	

Lab Sample ID: 180-129535-7 MS **Client Sample ID: WAP-6S Matrix: Water Prep Type: Total Recoverable** Analysis Batch: 378981 **Prep Batch: 378429** Spike MS MS %Rec. Sample Sample Result Qualifier Added Analyte Result Qualifier Unit D %Rec Limits 2.2 F1 1.25 75 - 125 Boron 3.11 F1 72 mg/L

Lab Sample ID: 180-129535-7 MSD **Client Sample ID: WAP-6S Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 378827									Prep Ba	itch: 37	78429
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND		0.250	0.235		mg/L		94	75 - 125	2	20
Arsenic	0.0010		1.00	1.02		mg/L		102	75 - 125	2	20
Barium	0.042		1.00	1.04		mg/L		100	75 - 125	3	20
Beryllium	ND		0.500	0.472		mg/L		94	75 - 125	2	20
Cadmium	ND		0.500	0.501		mg/L		100	75 - 125	2	20
Calcium	89		25.0	113		mg/L		96	75 - 125	1	20
Chromium	ND		0.500	0.492		mg/L		98	75 - 125	2	20
Cobalt	0.00092		0.500	0.514		mg/L		103	75 - 125	2	20
Lead	0.00018	J	0.500	0.505		mg/L		101	75 - 125	2	20
Lithium	ND		0.500	0.463		mg/L		93	75 - 125	2	20
Molybdenum	0.16		0.500	0.678		mg/L		104	75 - 125	1	20
Selenium	ND		1.00	1.00		mg/L		100	75 - 125	2	20
Thallium	0.00023	J	1.00	1.08		mg/L		108	75 - 125	3	20

Lab Sample ID: 180-129535-7 MSD Client Sample ID: WAP-6S **Prep Type: Total Recoverable Matrix: Water Analysis Batch: 378981 Prep Batch: 378429** Sample Sample Spike MSD MSD %Rec. **RPD** Result Qualifier Added Limits Analyte Result Qualifier Unit %Rec RPD Limit Boron 2.2 F1 1.25 3.11 F1 72 75 - 125 mg/L

Lab Sample ID: MB 180-378431/1-A

Matrix: Water

Analysis Batch: 378981

Client Sample ID: Method Blank **Prep Type: Total Recoverable Prep Batch: 378431**

	1410	1410							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/12/21 11:00	11/13/21 17:51	1
Arsenic	ND		0.0010	0.00031	mg/L		11/12/21 11:00	11/13/21 17:51	1
Barium	ND		0.010	0.0016	mg/L		11/12/21 11:00	11/13/21 17:51	1
Beryllium	ND		0.0010	0.00018	mg/L		11/12/21 11:00	11/13/21 17:51	1
Boron	ND		0.080	0.039	mg/L		11/12/21 11:00	11/13/21 17:51	1
Cadmium	ND		0.0010	0.00022	mg/L		11/12/21 11:00	11/13/21 17:51	1
Chromium	ND		0.0020	0.0015	mg/L		11/12/21 11:00	11/13/21 17:51	1
Cobalt	ND		0.00050	0.00013	mg/L		11/12/21 11:00	11/13/21 17:51	1

MB MB

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

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

MB MB

Result Qualifier

ND

Lab Sample ID: MB 180-378431/1-A

Matrix: Water

Analysis Batch: 378981

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 378431

Job ID: 180-129535-1

Analyte	Result Qua	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND	0.0010	0.00013	mg/L		11/12/21 11:00	11/13/21 17:51	1
Lithium	ND	0.0050	0.0034	mg/L		11/12/21 11:00	11/13/21 17:51	1
Molybdenum	ND	0.0050	0.00061	mg/L		11/12/21 11:00	11/13/21 17:51	1
Selenium	ND	0.0050	0.0015	mg/L		11/12/21 11:00	11/13/21 17:51	1
Thallium	ND	0.0010	0.00015	mg/L		11/12/21 11:00	11/13/21 17:51	1

RL

0.50

MDL Unit

0.13 mg/L

Lab Sample ID: MB 180-378431/1-A

Matrix: Water

Analyte

Calcium

Analysis Batch: 379323

MB MB

Client Sample ID: Method Blank **Prep Type: Total Recoverable Prep Batch: 378431**

Prepared Analyzed Dil Fac 11/12/21 11:00 11/17/21 12:57

Lab Sample ID: LCS 180-378431/2-A

Matrix: Water

Analysis Batch: 378981

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

Prep Batch: 378431

Analysis Buton. 070001	Spike	LCS	LCS				%Rec.
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
Antimony	0.250	0.246		mg/L		98	80 - 120
Arsenic	1.00	1.01		mg/L		101	80 - 120
Barium	1.00	1.01		mg/L		101	80 - 120
Beryllium	0.500	0.477		mg/L		95	80 - 120
Boron	1.25	1.09		mg/L		87	80 - 120
Cadmium	0.500	0.507		mg/L		101	80 - 120
Chromium	0.500	0.501		mg/L		100	80 - 120
Cobalt	0.500	0.515		mg/L		103	80 - 120
Lead	0.500	0.503		mg/L		101	80 - 120
Lithium	0.500	0.479		mg/L		96	80 - 120
Molybdenum	0.500	0.514		mg/L		103	80 - 120
Selenium	1.00	0.980		mg/L		98	80 - 120
Thallium	1.00	1.05		mg/L		105	80 - 120

Lab Sample ID: LCS 180-378431/2-A

Matrix: Water

Analysis Batch: 379323

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

Prep Batch: 378431

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits Calcium 25.0 28.6 mg/L 114 80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-378159/1-A

Matrix: Water

Analysis Batch: 378967

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

Prep Batch: 378159

MB MB Analyte Result Qualifier **MDL** Unit Prepared Analyzed Dil Fac Mercury ND 0.00020 0.00013 mg/L 11/09/21 06:20 11/15/21 12:20

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

Lab Sample ID: LCS 180-378159/2-A	Client Sample ID: Lab Control Sar						
Matrix: Water							Prep Type: Total/NA
Analysis Batch: 378967							Prep Batch: 378159
-	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits

0.00258

mg/L

103

80 - 120

Lab Sample ID: 180-129535-7 MS Client Sample ID: WAP-6S **Matrix: Water** Prep Type: Total/NA **Analysis Batch: 378967 Prep Batch: 378159** Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits ND 0.00100 75 - 125 Mercury 0.00101 mg/L 101

0.00250

Lab Sample ID: 180-129535-7 MSD Client Sample ID: WAP-6S **Matrix: Water** Prep Type: Total/NA **Analysis Batch: 378967 Prep Batch: 378159** Sample Sample Spike MSD MSD %Rec. **RPD** Analyte Result Qualifier Added Result Qualifier Limits RPD Limit Unit %Rec Mercury ND 0.00100 0.000949 75 - 125 20 mg/L

Method: EPA 9040C - pH

Mercury

Lab Sample ID: LCS 180-377902/1 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA **Analysis Batch: 377902** LCS LCS Spike %Rec.

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

Lab Sample ID: LCS 180-377903/1 **Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total/NA**

Analysis Batch: 377903

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

Lab Sample ID: 180-129535-6 DU Client Sample ID: WAP-5D **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 377903

DU DU RPD Sample Sample Result Qualifier Result Qualifier RPD Analyte Unit Limit pН 7.6 HF SU 0.1 7.6

Lab Sample ID: 180-129535-7 DU Client Sample ID: WAP-6S **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 377903 DU DU **RPD** Sample Sample

Analyte Result Qualifier Result Qualifier Unit Limit 7.6 HF 7.5 HF SU рН

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Project/Site: CCR Groundwater Monitoring FB Culley

Method: EPA 9040C	- pH	(Continued)
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Lab Sample ID: 180-129535-14 DU Client Sample ID: WAP-9I Prep Type: Total/NA

Matrix: Water

Analysis Batch: 377903

DU DU RPD Sample Sample Analyte Result Qualifier Result Qualifier D RPD Limit Unit SU рН 7.6 HF 7.6 0.3

Lab Sample ID: LCS 180-377921/1 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 377921

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

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

Lab Sample ID: MB 180-377880/2 Client Sample ID: Method Blank **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 377880

MB MB **MDL** Unit Analyte Result Qualifier RL Dil Fac Prepared Analyzed Total Dissolved Solids 10 11/05/21 17:30 ND 10 mg/L

Lab Sample ID: LCS 180-377880/1 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 377880

Spike LCS LCS %Rec. Added Limits Analyte Result Qualifier Unit D %Rec Total Dissolved Solids 422 426 101 80 - 120 mg/L

Lab Sample ID: 180-129535-7 DU Client Sample ID: WAP-6S **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 377880

DU DU **RPD** Sample Sample Analyte Result Qualifier Result Qualifier Unit **RPD** Limit Total Dissolved Solids 430 429 mg/L

Lab Sample ID: 180-129535-11 DU Client Sample ID: WAP-8I **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 377880

DU DU RPD Sample Sample Result Qualifier Result Qualifier RPD Limit Unit Total Dissolved Solids 270 285 mg/L

Lab Sample ID: MB 180-378125/2 **Client Sample ID: Method Blank Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 378125

MR MR Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Total Dissolved Solids 10 10 mg/L 11/08/21 17:13 ND

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Job ID: 180-129535-1

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: WAP-3D

Client Sample ID: Method Blank

10

Client Sample ID: Lab Control Sample

%Rec.

Limits

80 - 120

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Project/Site: CCR Groundwater Monitoring FB Culley

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

Lab Sample ID: LCS 180-378125/1

Matrix: Water

Analysis Batch: 378125

Client: Haley & Aldrich, Inc.

Spike LCS LCS Added Result Qualifier Unit %Rec Analyte D 422 **Total Dissolved Solids** 480 mg/L 114

Lab Sample ID: MB 180-378127/2

Matrix: Water

Analysis Batch: 378127

MB MB

MDL Unit Result Qualifier RL D Prepared Analyzed Dil Fac Analyte 10 10 mg/L 11/08/21 17:25 **Total Dissolved Solids** ND

Lab Sample ID: LCS 180-378127/1

Matrix: Water

Analysis Batch: 378127

Spike LCS LCS %Rec. Added Result Qualifier Limits Analyte Unit D %Rec Total Dissolved Solids 422 376 89 80 - 120 mg/L

Lab Sample ID: 180-129535-20 DU

Matrix: Water

Analysis Batch: 378127

DU DU **RPD** Sample Sample Analyte Result Qualifier Result Qualifier Unit **RPD** Limit Total Dissolved Solids 480 473 mg/L 10

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-535772/23-A

Matrix: Water

Analysis Batch: 540406

Prep Batch: 535772 Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 0.195 0.202 1.00 0.190 pCi/L 11/09/21 16:45 12/06/21 10:36 0.6023

MB MB %Yield

Carrier Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 83.5 40 - 110 11/09/21 16:45 12/06/21 10:36

Lab Sample ID: LCS 160-535772/1-A **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA **Analysis Batch: 540334** Prep Batch: 535772

Total LCS LCS %Rec. Spike Uncert. Added $(2\sigma + / -)$ RL %Rec Limits **Analyte** Result Qual **MDC** Unit Radium-226 11.3 9.947 1.15 1.00 0.253 pCi/L 88 75 - 125

LCS LCS

Carrier %Yield Qualifier Limits Ba Carrier 927 40 - 110

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Job ID: 180-129535-1

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 180-129535-7 DU Client Sample ID: WAP-6S

Matrix: Water

Analysis Batch: 540407

Prep Type: Total/NA

Prep Batch: 535772

					Total							
	Sample	Sample	DU	DU	Uncert.						RER	
Analyte	Result	Qual	Result	Qual	(2σ+/-)	RL	MDC	Unit		RER	Limit	
Radium-226	0.113	U	-0.00665	U	0.148	1.00	0.296	pCi/L	 	0.38	1	
			6									

DU DU

Carrier %Yield Qualifier Limits Ba Carrier 90.6 40 - 110

Method: 9320 - Radium-228 (GFPC)

Client Sample ID: Method Blank Lab Sample ID: MB 160-542176/23-A

Matrix: Water

Analysis Batch: 543040

Count

Prep Type: Total/NA

Prep Batch: 542176

			Count	Total						
	MB	MB	Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1122	U	0.327	0.327	1.00	0.567	pCi/L	12/15/21 10:20	12/20/21 13:59	1

Carrier **%Yield Qualifier** Limits Ba Carrier 40 - 110 98.3 Y Carrier 82.6 40 - 110

MB MB

Prepared Analyzed Dil Fac 12/15/21 10:20 12/20/21 13:59 12/15/21 10:20 12/20/21 13:59

Lab Sample ID: LCS 160-542176/1-A

Matrix: Water

Analysis Batch: 543041

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

Prep Batch: 542176

				Iotai					
	Spike	LCS	LCS	Uncert.					%Rec.
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC	Unit	%Rec	Limits
Radium-228	12.1	14.14		1.68	1.00	0.546	pCi/L	117	75 - 125

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 84.1 40 - 110 Y Carrier 81.9 40 - 110

Lab Sample ID: LCSD 160-542176/2-A

Matrix: Water

Analysis Batch: 543041

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA **Prep Batch: 542176**

Total Spike LCSD LCSD Uncert. %Rec. **RER** Analyte Added (2σ+/-) RL**MDC** Unit %Rec Limits RER Result Qual Limit Radium-228 12.1 13.39 1.61 1.00 0.589 pCi/L 111 75 - 125 0.23

LCSD LCSD Carrier %Yield Qualifier Limits 40 - 110 Ba Carrier 86.6 Y Carrier 81.9 40 - 110

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

HPLC/IC

Analysis Batch: 377720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-1	WAP-4S	Total/NA	Water	EPA 9056A	
180-129535-1	WAP-4S	Total/NA	Water	EPA 9056A	
180-129535-2	WAP-4I	Total/NA	Water	EPA 9056A	
180-129535-3	WAP-4D	Total/NA	Water	EPA 9056A	
180-129535-4	WAP-5S	Total/NA	Water	EPA 9056A	
180-129535-5	WAP-5I	Total/NA	Water	EPA 9056A	
180-129535-6	WAP-5D	Total/NA	Water	EPA 9056A	
180-129535-7	WAP-6S	Total/NA	Water	EPA 9056A	
180-129535-8	WAP-6I	Total/NA	Water	EPA 9056A	
180-129535-9	WAP-6D	Total/NA	Water	EPA 9056A	
180-129535-10	WAP-8S	Total/NA	Water	EPA 9056A	
180-129535-10	WAP-8S	Total/NA	Water	EPA 9056A	
180-129535-11	WAP-8I	Total/NA	Water	EPA 9056A	
180-129535-12	WAP-8D	Total/NA	Water	EPA 9056A	
180-129535-13	WAP-9S	Total/NA	Water	EPA 9056A	
180-129535-14	WAP-9I	Total/NA	Water	EPA 9056A	
180-129535-15	WAP-9D	Total/NA	Water	EPA 9056A	
180-129535-16	FB-1	Total/NA	Water	EPA 9056A	
180-129535-17	DUP-1	Total/NA	Water	EPA 9056A	
180-129535-17	DUP-1	Total/NA	Water	EPA 9056A	
180-129535-18	DUP-2	Total/NA	Water	EPA 9056A	
180-129535-18	DUP-2	Total/NA	Water	EPA 9056A	
180-129535-19	WAP-3S	Total/NA	Water	EPA 9056A	
180-129535-20	WAP-3D	Total/NA	Water	EPA 9056A	
MB 180-377720/55	Method Blank	Total/NA	Water	EPA 9056A	
MB 180-377720/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-377720/54	Lab Control Sample	Total/NA	Water	EPA 9056A	
LCS 180-377720/6	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-129535-5 MS	WAP-5I	Total/NA	Water	EPA 9056A	
180-129535-5 MSD	WAP-5I	Total/NA	Water	EPA 9056A	
180-129535-7 MS	WAP-6S	Total/NA	Water	EPA 9056A	
180-129535-7 MSD	WAP-6S	Total/NA	Water	EPA 9056A	

Analysis Batch: 381392

Lab Sample ID 180-129535-4 - RA 180-129535-4 - RA	Client Sample ID WAP-5S WAP-5S	Prep Type Total/NA Total/NA	Matrix Water Water	Method EPA 9056A EPA 9056A	Prep Batch
180-129535-17 - RA	DUP-1	Total/NA	Water	EPA 9056A	
180-129535-17 - RA	DUP-1	Total/NA	Water	EPA 9056A	
MB 180-381392/33	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-381392/32	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 378159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-1	WAP-4S	Total/NA	Water	7470A	
180-129535-2	WAP-4I	Total/NA	Water	7470A	
180-129535-3	WAP-4D	Total/NA	Water	7470A	
180-129535-4	WAP-5S	Total/NA	Water	7470A	
180-129535-5	WAP-5I	Total/NA	Water	7470A	

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Job ID: 180-129535-1

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Client: Haley & Aldrich, Inc.

Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Metals (Continued)

Prep Batch: 378159 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-6	WAP-5D	Total/NA	Water	7470A	
180-129535-7	WAP-6S	Total/NA	Water	7470A	
180-129535-8	WAP-6I	Total/NA	Water	7470A	
180-129535-9	WAP-6D	Total/NA	Water	7470A	
180-129535-10	WAP-8S	Total/NA	Water	7470A	
180-129535-11	WAP-8I	Total/NA	Water	7470A	
180-129535-12	WAP-8D	Total/NA	Water	7470A	
180-129535-13	WAP-9S	Total/NA	Water	7470A	
180-129535-14	WAP-9I	Total/NA	Water	7470A	
180-129535-15	WAP-9D	Total/NA	Water	7470A	
180-129535-16	FB-1	Total/NA	Water	7470A	
180-129535-17	DUP-1	Total/NA	Water	7470A	
180-129535-18	DUP-2	Total/NA	Water	7470A	
180-129535-19	WAP-3S	Total/NA	Water	7470A	
180-129535-20	WAP-3D	Total/NA	Water	7470A	
MB 180-378159/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-378159/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-129535-7 MS	WAP-6S	Total/NA	Water	7470A	
180-129535-7 MSD	WAP-6S	Total/NA	Water	7470A	

Prep Batch: 378429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-7	WAP-6S	Total Recoverable	Water	3005A	
180-129535-8	WAP-6I	Total Recoverable	Water	3005A	
180-129535-9	WAP-6D	Total Recoverable	Water	3005A	
180-129535-10	WAP-8S	Total Recoverable	Water	3005A	
180-129535-11	WAP-8I	Total Recoverable	Water	3005A	
180-129535-12	WAP-8D	Total Recoverable	Water	3005A	
180-129535-13	WAP-9S	Total Recoverable	Water	3005A	
180-129535-14	WAP-9I	Total Recoverable	Water	3005A	
180-129535-15	WAP-9D	Total Recoverable	Water	3005A	
180-129535-16	FB-1	Total Recoverable	Water	3005A	
180-129535-17	DUP-1	Total Recoverable	Water	3005A	
180-129535-18	DUP-2	Total Recoverable	Water	3005A	
180-129535-19	WAP-3S	Total Recoverable	Water	3005A	
180-129535-20	WAP-3D	Total Recoverable	Water	3005A	
MB 180-378429/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-378429/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-129535-7 MS	WAP-6S	Total Recoverable	Water	3005A	
180-129535-7 MSD	WAP-6S	Total Recoverable	Water	3005A	

Prep Batch: 378431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-1	WAP-4S	Total Recoverable	Water	3005A	<u> </u>
180-129535-2	WAP-4I	Total Recoverable	Water	3005A	
180-129535-3	WAP-4D	Total Recoverable	Water	3005A	
180-129535-4	WAP-5S	Total Recoverable	Water	3005A	
180-129535-5	WAP-5I	Total Recoverable	Water	3005A	
180-129535-6	WAP-5D	Total Recoverable	Water	3005A	
MB 180-378431/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-378431/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

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Client: Haley & Aldrich, Inc.

Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Metals

Analysis Batch: 378827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-7	WAP-6S	Total Recoverable	Water	EPA 6020A	378429
180-129535-8	WAP-6I	Total Recoverable	Water	EPA 6020A	378429
180-129535-9	WAP-6D	Total Recoverable	Water	EPA 6020A	378429
180-129535-10	WAP-8S	Total Recoverable	Water	EPA 6020A	378429
180-129535-11	WAP-8I	Total Recoverable	Water	EPA 6020A	378429
180-129535-12	WAP-8D	Total Recoverable	Water	EPA 6020A	378429
180-129535-13	WAP-9S	Total Recoverable	Water	EPA 6020A	378429
180-129535-14	WAP-9I	Total Recoverable	Water	EPA 6020A	378429
180-129535-15	WAP-9D	Total Recoverable	Water	EPA 6020A	378429
180-129535-16	FB-1	Total Recoverable	Water	EPA 6020A	378429
180-129535-17	DUP-1	Total Recoverable	Water	EPA 6020A	378429
180-129535-18	DUP-2	Total Recoverable	Water	EPA 6020A	378429
180-129535-19	WAP-3S	Total Recoverable	Water	EPA 6020A	378429
180-129535-20	WAP-3D	Total Recoverable	Water	EPA 6020A	378429
MB 180-378429/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	378429
LCS 180-378429/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	378429
180-129535-7 MS	WAP-6S	Total Recoverable	Water	EPA 6020A	378429
180-129535-7 MSD	WAP-6S	Total Recoverable	Water	EPA 6020A	378429

Analysis Batch: 378967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-1	WAP-4S	Total/NA	Water	EPA 7470A	378159
180-129535-2	WAP-4I	Total/NA	Water	EPA 7470A	378159
180-129535-3	WAP-4D	Total/NA	Water	EPA 7470A	378159
180-129535-4	WAP-5S	Total/NA	Water	EPA 7470A	378159
180-129535-5	WAP-5I	Total/NA	Water	EPA 7470A	378159
180-129535-6	WAP-5D	Total/NA	Water	EPA 7470A	378159
180-129535-7	WAP-6S	Total/NA	Water	EPA 7470A	378159
180-129535-8	WAP-6I	Total/NA	Water	EPA 7470A	378159
180-129535-9	WAP-6D	Total/NA	Water	EPA 7470A	378159
180-129535-10	WAP-8S	Total/NA	Water	EPA 7470A	378159
180-129535-11	WAP-8I	Total/NA	Water	EPA 7470A	378159
180-129535-12	WAP-8D	Total/NA	Water	EPA 7470A	378159
180-129535-13	WAP-9S	Total/NA	Water	EPA 7470A	378159
180-129535-14	WAP-9I	Total/NA	Water	EPA 7470A	378159
180-129535-15	WAP-9D	Total/NA	Water	EPA 7470A	378159
180-129535-16	FB-1	Total/NA	Water	EPA 7470A	378159
180-129535-17	DUP-1	Total/NA	Water	EPA 7470A	378159
180-129535-18	DUP-2	Total/NA	Water	EPA 7470A	378159
180-129535-19	WAP-3S	Total/NA	Water	EPA 7470A	378159
180-129535-20	WAP-3D	Total/NA	Water	EPA 7470A	378159
MB 180-378159/1-A	Method Blank	Total/NA	Water	EPA 7470A	378159
LCS 180-378159/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	378159
180-129535-7 MS	WAP-6S	Total/NA	Water	EPA 7470A	378159
180-129535-7 MSD	WAP-6S	Total/NA	Water	EPA 7470A	378159

Analysis Batch: 378981

Lab Sample ID 180-129535-1	Client Sample ID WAP-4S	Prep Type Total Recoverable	Matrix Water	Method EPA 6020A	Prep Batch 378431
180-129535-2	WAP-4I	Total Recoverable	Water	EPA 6020A	378431
180-129535-3	WAP-4D	Total Recoverable	Water	EPA 6020A	378431

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Client: Haley & Aldrich, Inc.

Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Metals (Continued)

Analysis Batch: 378981 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-4	WAP-5S	Total Recoverable	Water	EPA 6020A	378431
180-129535-5	WAP-5I	Total Recoverable	Water	EPA 6020A	378431
180-129535-6	WAP-5D	Total Recoverable	Water	EPA 6020A	378431
180-129535-7	WAP-6S	Total Recoverable	Water	EPA 6020A	378429
180-129535-8	WAP-6I	Total Recoverable	Water	EPA 6020A	378429
180-129535-9	WAP-6D	Total Recoverable	Water	EPA 6020A	378429
180-129535-10	WAP-8S	Total Recoverable	Water	EPA 6020A	378429
180-129535-11	WAP-8I	Total Recoverable	Water	EPA 6020A	378429
180-129535-12	WAP-8D	Total Recoverable	Water	EPA 6020A	378429
180-129535-13	WAP-9S	Total Recoverable	Water	EPA 6020A	378429
180-129535-14	WAP-9I	Total Recoverable	Water	EPA 6020A	378429
180-129535-15	WAP-9D	Total Recoverable	Water	EPA 6020A	378429
180-129535-16	FB-1	Total Recoverable	Water	EPA 6020A	378429
180-129535-17	DUP-1	Total Recoverable	Water	EPA 6020A	378429
180-129535-18	DUP-2	Total Recoverable	Water	EPA 6020A	378429
180-129535-19	WAP-3S	Total Recoverable	Water	EPA 6020A	378429
180-129535-20	WAP-3D	Total Recoverable	Water	EPA 6020A	378429
MB 180-378429/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	378429
MB 180-378431/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	378431
LCS 180-378429/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	378429
LCS 180-378431/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	378431
180-129535-7 MS	WAP-6S	Total Recoverable	Water	EPA 6020A	378429
180-129535-7 MSD	WAP-6S	Total Recoverable	Water	EPA 6020A	378429

Analysis Batch: 379323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-1	WAP-4S	Total Recoverable	Water	EPA 6020A	378431
180-129535-2	WAP-4I	Total Recoverable	Water	EPA 6020A	378431
180-129535-3	WAP-4D	Total Recoverable	Water	EPA 6020A	378431
180-129535-4	WAP-5S	Total Recoverable	Water	EPA 6020A	378431
180-129535-5	WAP-5I	Total Recoverable	Water	EPA 6020A	378431
180-129535-6	WAP-5D	Total Recoverable	Water	EPA 6020A	378431
MB 180-378431/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	378431
LCS 180-378431/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	378431

General Chemistry

Analysis Batch: 377880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-1	WAP-4S	Total/NA	Water	SM 2540C	_
180-129535-2	WAP-4I	Total/NA	Water	SM 2540C	
180-129535-3	WAP-4D	Total/NA	Water	SM 2540C	
180-129535-4	WAP-5S	Total/NA	Water	SM 2540C	
180-129535-5	WAP-5I	Total/NA	Water	SM 2540C	
180-129535-6	WAP-5D	Total/NA	Water	SM 2540C	
180-129535-7	WAP-6S	Total/NA	Water	SM 2540C	
180-129535-8	WAP-6I	Total/NA	Water	SM 2540C	
180-129535-9	WAP-6D	Total/NA	Water	SM 2540C	
180-129535-10	WAP-8S	Total/NA	Water	SM 2540C	
180-129535-11	WAP-8I	Total/NA	Water	SM 2540C	
180-129535-12	WAP-8D	Total/NA	Water	SM 2540C	

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Client: Haley & Aldrich, Inc. Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

General Chemistry (Continued)

Analysis Batch: 377880 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-13	WAP-9S	Total/NA	Water	SM 2540C	
180-129535-16	FB-1	Total/NA	Water	SM 2540C	
180-129535-17	DUP-1	Total/NA	Water	SM 2540C	
180-129535-18	DUP-2	Total/NA	Water	SM 2540C	
MB 180-377880/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-377880/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-129535-7 DU	WAP-6S	Total/NA	Water	SM 2540C	
180-129535-11 DU	WAP-8I	Total/NA	Water	SM 2540C	

Analysis Batch: 377902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-1	WAP-4S	Total/NA	Water	EPA 9040C	
180-129535-2	WAP-4I	Total/NA	Water	EPA 9040C	
180-129535-3	WAP-4D	Total/NA	Water	EPA 9040C	
180-129535-4	WAP-5S	Total/NA	Water	EPA 9040C	
180-129535-5	WAP-5I	Total/NA	Water	EPA 9040C	
LCS 180-377902/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 377903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-6	WAP-5D	Total/NA	Water	EPA 9040C	
180-129535-7	WAP-6S	Total/NA	Water	EPA 9040C	
180-129535-8	WAP-6I	Total/NA	Water	EPA 9040C	
180-129535-9	WAP-6D	Total/NA	Water	EPA 9040C	
180-129535-10	WAP-8S	Total/NA	Water	EPA 9040C	
180-129535-11	WAP-8I	Total/NA	Water	EPA 9040C	
180-129535-12	WAP-8D	Total/NA	Water	EPA 9040C	
180-129535-13	WAP-9S	Total/NA	Water	EPA 9040C	
180-129535-14	WAP-9I	Total/NA	Water	EPA 9040C	
180-129535-15	WAP-9D	Total/NA	Water	EPA 9040C	
180-129535-16	FB-1	Total/NA	Water	EPA 9040C	
180-129535-17	DUP-1	Total/NA	Water	EPA 9040C	
180-129535-18	DUP-2	Total/NA	Water	EPA 9040C	
LCS 180-377903/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-129535-6 DU	WAP-5D	Total/NA	Water	EPA 9040C	
180-129535-7 DU	WAP-6S	Total/NA	Water	EPA 9040C	
180-129535-14 DU	WAP-9I	Total/NA	Water	EPA 9040C	

Analysis Batch: 377921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-19	WAP-3S	Total/NA	Water	EPA 9040C	
180-129535-20	WAP-3D	Total/NA	Water	EPA 9040C	
LCS 180-377921/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 378125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-14	WAP-9I	Total/NA	Water	SM 2540C	
180-129535-15	WAP-9D	Total/NA	Water	SM 2540C	
MB 180-378125/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-378125/1	Lab Control Sample	Total/NA	Water	SM 2540C	

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

General Chemistry

Analysis Batch: 378127

Lab Sample ID 180-129535-19	Client Sample ID WAP-3S	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
180-129535-20	WAP-3D	Total/NA	Water	SM 2540C	
MB 180-378127/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-378127/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-129535-20 DU	WAP-3D	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 535772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-1	WAP-4S	Total/NA	Water	PrecSep-21	
180-129535-2	WAP-4I	Total/NA	Water	PrecSep-21	
180-129535-3	WAP-4D	Total/NA	Water	PrecSep-21	
180-129535-4	WAP-5S	Total/NA	Water	PrecSep-21	
180-129535-5	WAP-5I	Total/NA	Water	PrecSep-21	
180-129535-6	WAP-5D	Total/NA	Water	PrecSep-21	
180-129535-7	WAP-6S	Total/NA	Water	PrecSep-21	
180-129535-8	WAP-6I	Total/NA	Water	PrecSep-21	
180-129535-9	WAP-6D	Total/NA	Water	PrecSep-21	
180-129535-10	WAP-8S	Total/NA	Water	PrecSep-21	
180-129535-11	WAP-8I	Total/NA	Water	PrecSep-21	
180-129535-12	WAP-8D	Total/NA	Water	PrecSep-21	
180-129535-13	WAP-9S	Total/NA	Water	PrecSep-21	
180-129535-14	WAP-9I	Total/NA	Water	PrecSep-21	
180-129535-15	WAP-9D	Total/NA	Water	PrecSep-21	
180-129535-16	FB-1	Total/NA	Water	PrecSep-21	
180-129535-17	DUP-1	Total/NA	Water	PrecSep-21	
180-129535-18	DUP-2	Total/NA	Water	PrecSep-21	
180-129535-19	WAP-3S	Total/NA	Water	PrecSep-21	
180-129535-20	WAP-3D	Total/NA	Water	PrecSep-21	
MB 160-535772/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-535772/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-129535-7 DU	WAP-6S	Total/NA	Water	PrecSep-21	

Prep Batch: 542176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-1	WAP-4S	Total/NA	Water	PrecSep_0	
180-129535-2	WAP-4I	Total/NA	Water	PrecSep_0	
180-129535-3	WAP-4D	Total/NA	Water	PrecSep_0	
180-129535-4	WAP-5S	Total/NA	Water	PrecSep_0	
180-129535-5	WAP-5I	Total/NA	Water	PrecSep_0	
180-129535-6	WAP-5D	Total/NA	Water	PrecSep_0	
180-129535-7	WAP-6S	Total/NA	Water	PrecSep_0	
180-129535-8	WAP-6I	Total/NA	Water	PrecSep_0	
180-129535-9	WAP-6D	Total/NA	Water	PrecSep_0	
180-129535-10	WAP-8S	Total/NA	Water	PrecSep_0	
180-129535-11	WAP-8I	Total/NA	Water	PrecSep_0	
180-129535-12	WAP-8D	Total/NA	Water	PrecSep_0	
180-129535-13	WAP-9S	Total/NA	Water	PrecSep_0	
180-129535-14	WAP-9I	Total/NA	Water	PrecSep_0	
180-129535-15	WAP-9D	Total/NA	Water	PrecSep 0	

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Job ID: 180-129535-1

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Client: Haley & Aldrich, Inc.

Job ID: 180-129535-1

Project/Site: CCR Groundwater Monitoring FB Culley

Rad (Continued)

Prep Batch: 542176 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129535-16	FB-1	Total/NA	Water	PrecSep_0	
180-129535-17	DUP-1	Total/NA	Water	PrecSep_0	
180-129535-18	DUP-2	Total/NA	Water	PrecSep_0	
180-129535-19	WAP-3S	Total/NA	Water	PrecSep_0	
180-129535-20	WAP-3D	Total/NA	Water	PrecSep_0	
MB 160-542176/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-542176/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-542176/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

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Chain of Custody Record

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Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468 Lab PM: Carrier Tracking No(s): Client Information 180-75297-14505.1 Hayes, Ken Client Contact: E-Mail: State of Origin: Page: 317-473-1325 IN Mark Breting Ken.Hayes@Eurofinset.com Page 1 of 2 Company: Job#: Atlas Technical Consultants LLC **Analysis Requested** Due Date Requested: Preservation Codes: 7988 Centerpoint Drive Suite 100 A - HCL M - Hexane TAT Requested (days): B - NaOH N - None Indianapolis C - Zn Acetate O - AsNaO2 State, Zip: P - Na2O4S D - Nitric Acid IN, 46256 Compliance Project: A Yes A No E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 Phone: G - Amchlor S - H2SO4 864-214-8750(Tel) FB-242026. AB-241410 T - TSP Dodecahydrate H - Ascorbic Acid U - Acetone I - Ice mark.breting@atcassociates.com V - MCAA J - DI Water W-pH4-5 K - EDTA Project #: Z - other (specify) L - EDA CCR Groundwater Monitoring FB Culley 18016014 SSOW#: 2540C_Calcd - TDS Matrix Sample Type Sample (C=comp, Sample Identification Sample Date Time G=grab) Special Instructions/Note: Preservation Code: 747 wap- 45 11.2.21 WAP- 4I 822 WAP - 4D 900 WAP- 55 11-1-21 1355 WAP-SI 1453 WAP- 5D 1552 11.2.21 1229 1304 1542 WAP- BS 952 WAP - BI 1034 Poșsible Hazard Identification Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Disposal By Lab Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Archive For Return To Client Months Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Method of Shipment: Empty Kit Relinquished by: Date: Time: Relinquished by: Date/Time: Company Received by 11.3.21 1tc Relinquished by: Date/Time: Company Received by: Relinquished by: Date/Time: Company Received by: Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: Δ Yes Δ No

Ver: 06/08/2021

1/7/2022

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238 Phone: 412-963-7058 Fax: 412-963-2468

Chain of Custody Record

eurofins

Environment Testing America

Client Information	Sampler:	141	11	Lab P Haye	м: es, Ken						cking No(s):		COC No: 180-75297-14505	.2
Client Contact: Mark Breting	Phone: 317- 4			E-Ma)Euros	neet ~			State of O	rigin: In)	Page: Page 2 of 2	
Company:	317- 4		PWSID:	IKeii	паусье	<u>y</u> Euron	IIISEL.G						Job#:	-
Atlas Technical Consultants LLC	To 0				- T			Ana	lysis R	equested				
Address: 7988 Centerpoint Drive Suite 100	Due Date Requeste	a:			4						1 1 1		Preservation Code	
City:	TAT Requested (day	ys):			B [23							100	A - HCL B - NaOH	M - Hexane N - None
Indianapolis State, Zip:					題		1					71	C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S
IN, 46256	Compliance Project	t Δ Yes	Δ No		圖翻							100	E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3
Phone:	PO #: FB-242026. AB-:	241410											G - Amchlor	S - H2SO4
864-214-8750(Tel) Email:	WO#:	241410			(ON				11	1 1	1 1 1	1	H - Ascorbic Acid I - Ice	T - TSP Dodecahydrate U - Acetone
mark.breting@atcassociates.com					OM:								J - DI Water K - EDTA	V - MCAA W - pH 4-5
Project Name: CCR Groundwater Monitoring FB Culley	Project #: 18016014				0.0	280			1 1				L-EDA	Z - other (specify)
Site:	SSOW#:	_	-	-	oldi	F.		Ra22				18	Other:	
					Sarr	ORG	TDS	8						
			Sample	Matrix	teld Filtered Sample	9040C, 9056A_ORGFM_28D	2540C_Calcd - TDS	9316_Ra226, 9320_Ra228						
			Туре	(W-water, Smolid	Filte	906	0	Raz						
Comple Identification	Sample Date	Sample Time	(C=comp,	S=solid, O=waste/oil, BT=Tiesue, A=Air	Fleid I	9040C,	540	울					Special In	structions/Note:
Sample Identification	Sample Date			tion Code:		N D	-	5					Special III	Qui dell' el
WORD WAP- 8D	11.2.21	1130	6	W			Ĭ,	1						
WAP- 95	11.2.21	1542												
WAP - 9I	11.3.21	750												
WAP- 9D	11.3.21	830											×	
FB-1	11.1.21	1412												
Dup-1	11.1.21	_												
DUP-Z	11.2.21	_												
ms-1	11.2.21	1229											wap-	65
msD-1	11.2.21	1229											WAP -	65
WAP-35	11.3.21	912											*	
WAP-3D	11.3.21	954	V			11	JV	U					0.	
Possible Hazard Identification			,		Sa	mple [)ispos	al (A f	e may b	e assesse	d if sample:	s are reta	ined longer than 1 chive For	month)
Non-Hazard Flammable Skin Irritan	nt Poison B Unkn	nown 💾	Radiologica	<i>l</i>							By Lab	A	chive For	Months
Deliverable Requested: I, II, III, IV, Other (specify)					Sp	ecial In	struction	ons/QC	Require	ments:				
Empty Kit Relinquished by:		Date:			Time:					Me	thod of Shipme	ent		
Relinquished by:	Date/Time:	21/	200	Company	~	Receiv	ed by:	1	Nort	om	Date/	ime: — (1-21	Company
Relinquished by:	Date/Time:			Company		Receiv	ed by:				Date/	ime; 41	510:45	Company
Relinquished by:	Date/Time:			Company	-	Receiv	ed by:				Date/	Time:	DU	Company
Custody Seals Intact: Custody Seal No.:	The second second													I

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-129535-1

Login Number: 129535 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.	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: 180-129535-1

Login Number: 129535
List Source: Eurofins St. Louis
List Number: 2
List Creation: 11/08/21 03:16 PM

Creator: Korrinhizer, Micha L

Answer	Comment
True	
True	
True	
True	
N/A	
True	
N/A	
	True True True True True True True True

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ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-129538-1

Client Project/Site: CCR Groundwater Monitoring FB Culley

For:

Haley & Aldrich, Inc. 465 Medford St Suite 2200 Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Kuntll Haye

Authorized for release by: 12/9/2021 8:16:01 AM

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@Eurofinset.com

.....LINKS

Review your project results through

Total Access

Have a Question?



Visit us at: www.eurofinsus.com/Env This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Job ID: 180-129538-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-129538-1

Comments

No additional comments.

Receipt

The samples were received on 11/4/2021 2:15 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.7° C.

GC Semi VOA

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

RAD

Methods 903.0, 904.0, 9315, 9320: Radium 226 batch 535811

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-7S (180-129538-1), WAP-7D (180-129538-2), (LCS 160-535811/1-A), (LCSD 160-535811/2-A) and (MB 160-535811/23-A)

Method PrecSep_0: Radium-228 Prep Batch 160-535814

The following samples were prepared at a reduced aliquot due to Matrix: WAP-7D (180-129538-2). A laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-535811

The following samples were prepared at a reduced aliquot due to Matrix: WAP-7D (180-129538-2). A laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

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

Metals

Method 6020A: The following samples were diluted to bring the concentration of target analytes within the calibration range: WAP-7S (180-129538-1), WAP-7D (180-129538-2), (180-129538-E-1-C MS ^10), (180-129538-E-1-D MSD ^10), (180-129538-E-1-B PDS ^10) and (180-129538-E-1-B SD ^50). 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.

General Chemistry

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

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Job ID: 180-129538-1

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Eurofins TestAmerica, Pittsburgh 12/9/2021

Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-129538-1

Project/Site: CCR Groundwater Monitoring FB Culley

Qualifiers

M	eta	Is
•••		•

 Qualifier
 Qualifier Description

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 MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not

applicable.

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

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

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Laboratory: Eurofins TestAmerica, 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	04-30-22
Connecticut	State	PH-0688	09-30-22
Florida	NELAP	E871008	06-30-22
Georgia	State	PA 02-00416	04-30-22
Illinois	NELAP	004375	06-30-22
Kansas	NELAP	E-10350	01-31-22
Kentucky (UST)	State	162013	04-30-22
Kentucky (WW)	State	KY98043	12-31-21
Louisiana	NELAP	04041	06-30-22
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-21
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	04-05-22
New Jersey	NELAP	PA005	06-30-22
New York	NELAP	11182	04-01-22
North Carolina (WW/SW)	State	434	12-31-21
North Dakota	State	R-227	04-30-22
Oregon	NELAP	PA-2151	02-06-22
Pennsylvania	NELAP	02-00416	04-30-22
Rhode Island	State	LAO00362	12-31-21
South Carolina	State	89014	04-30-22
Texas	NELAP	T104704528	03-31-22
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-22
Virginia	NELAP	10043	09-15-22
West Virginia DEP	State	142	01-31-22
Wisconsin	State	998027800	08-31-22

Laboratory: Eurofins TestAmerica, 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	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-21
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	06-30-21 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21

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

Eurofins TestAmerica, Pittsburgh

Job ID: 180-129538-1

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Job ID: 180-129538-1

Laboratory: Eurofins TestAmerica, 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	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-21
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-22
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	03-01-22
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

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Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-129538-1	WAP-7S	Water	11/03/21 10:30	11/04/21 14:15
180-129538-2	WAP-7D	Water	11/03/21 11:10	11/04/21 14:15

Job ID: 180-129538-1

Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
EPA 9040C	рН	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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.

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

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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

Job ID: 180-129538-1

Lab Chronicle

Client: Haley & Aldrich, Inc. Job ID: 180-129538-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-7S

Date Collected: 11/03/21 10:30 Date Received: 11/04/21 14:15 Lab Sample ID: 180-129538-1

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: CHIC2100A		1			377721	11/05/21 20:03	JRB	TAL PIT
Total/NA	Analysis Instrumer	EPA 9056A at ID: CHIC2100A		5			377721	11/05/21 20:19	JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A at ID: A		1	50 mL	50 mL	378431 378981	11/12/21 11:00 11/13/21 18:20		TAL PIT TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A at ID: A		10	50 mL	50 mL	378431 379323	11/12/21 11:00 11/17/21 13:05		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	7470A EPA 7470A nt ID: HGY		1	25 mL	25 mL	378157 378424	11/09/21 06:16 11/10/21 10:57		TAL PIT TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: OZ		1			377921	11/06/21 08:27	MJH	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	378127	11/08/21 17:25	KMM	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep-21 9315 at ID: GFPCBLUE		1	1000.36 mL	1.0 g	535811 540040	11/10/21 10:19 12/03/21 10:22		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep_0 9320 at ID: GFPCBLUE		1	1000.36 mL	1.0 g	535814 538449	11/10/21 10:58 11/24/21 17:04		TAL SL TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			541059	12/08/21 21:34	MLK	TAL SL

Client Sample ID: WAP-7D Date Collected: 11/03/21 11:10 Date Received: 11/04/21 14:15 Lab Sample ID: 180-129538-2 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: CHIC2100A		2.5			377721	11/05/21 20:36	JRB	TAL PIT
Total/NA	Analysis Instrumer	EPA 9056A at ID: CHIC2100A		25			377721	11/05/21 20:52	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A nt ID: A		1			378981	11/13/21 19:33	RJR	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378431	11/12/21 11:00	RGM	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A nt ID: A		10			379323	11/17/21 13:19	RSK	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378157	11/09/21 06:16	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGY		1			378424	11/10/21 10:58	RJR	TAL PIT

Eurofins TestAmerica, Pittsburgh

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Lab Chronicle

Client: Haley & Aldrich, Inc. Job ID: 180-129538-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-7D Lab Sample ID: 180-129538-2

Date Collected: 11/03/21 11:10 **Matrix: Water** Date Received: 11/04/21 14:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9040C		1			377921	11/06/21 08:32	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	50 mL	100 mL	378127	11/08/21 17:25	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			750.63 mL	1.0 g	535811	11/10/21 10:19	LPS	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1			540040	12/03/21 10:22	FLC	TAL SL
Total/NA	Prep	PrecSep_0			750.63 mL	1.0 g	535814	11/10/21 10:58	LPS	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCBLUE		1	1.0 mL	1.0 mL	538449	11/24/21 17:04	FLC	TAL SL

541059

12/08/21 21:34 MLK

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058 TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL PIT

Total/NA

Batch Type: Prep

RGM = Rebecca Manns

Analysis

Ra226_Ra228

Instrument ID: NOEQUIP

RJR = Ron Rosenbaum

Batch Type: Analysis

JRB = James Burzio

KMM = Kendric Moore

MJH = Michael Houde

RJR = Ron Rosenbaum

RSK = Robert Kurtz

Lab: TAL SL

Batch Type: Prep

LPS = Lauren Szostak

Batch Type: Analysis

FLC = Fernando Cruz

MLK = Micha Korrinhizer

Eurofins TestAmerica, Pittsburgh

TAL SL

Client: Haley & Aldrich, Inc. Job ID: 180-129538-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-7S Lab Sample ID: 180-129538-1

Date Collected: 11/03/21 10:30

Matrix: Water

Date Received: 11/04/21 14:15

Y Carrier

95.3

Analyte		Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride		63		1.0	0.71	mg/L			11/05/21 20:03	
Fluoride		0.13		0.10	0.026	mg/L			11/05/21 20:03	
Sulfate		310		5.0	3.8	mg/L			11/05/21 20:19	
Method: EPA 6020A -	Metals	(ICP/MS) - To	otal Reco	verable						
Analyte		Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Antimony		0.0014	J	0.0020	0.00038	mg/L		11/12/21 11:00	11/13/21 18:20	
Arsenic		0.0083		0.0010	0.00031	mg/L		11/12/21 11:00	11/13/21 18:20	
Barium		0.032		0.010	0.0016			11/12/21 11:00	11/13/21 18:20	
Beryllium		ND		0.0010	0.00018	mg/L		11/12/21 11:00	11/13/21 18:20	
Boron		16		0.80	0.39	mg/L		11/12/21 11:00	11/17/21 13:05	
Cadmium		ND		0.0010	0.00022	mg/L		11/12/21 11:00	11/13/21 18:20	
Calcium		150		5.0	1.3	mg/L		11/12/21 11:00	11/17/21 13:05	
Chromium		ND		0.0020	0.0015	mg/L		11/12/21 11:00	11/13/21 18:20	
Cobalt		0.00016	J	0.00050	0.00013	mg/L		11/12/21 11:00	11/13/21 18:20	
Lead		0.00022	J	0.0010	0.00013	mg/L		11/12/21 11:00	11/13/21 18:20	
Lithium		0.13		0.0050	0.0034	mg/L		11/12/21 11:00	11/13/21 18:20	
Molybdenum		0.17		0.0050	0.00061	mg/L		11/12/21 11:00	11/13/21 18:20	
Selenium		ND		0.0050	0.0015	mg/L		11/12/21 11:00	11/13/21 18:20	
Thallium		0.00038	J	0.0010	0.00015	mg/L		11/12/21 11:00	11/13/21 18:20	
Mercury General Chemistry		ND		0.00020	0.00013	-				
Analyte			Qualifier	RL		Unit	_ D	Prepared	Analyzed	Dil F
Total Dissolved Solids		720		10		mg/L			11/08/21 17:25	
Analyte			Qualifier	RL		Unit	_ D	Prepared	Analyzed	Dil F
pH		9.9	HF	0.1	0.1	SU			11/06/21 08:27	
	.m 226 /									
Method: 9315 - Radiι	1111-226 ((GFPC)								
Method: 9315 - Radiı	1111-226 ((GFPC)	Count	Total						
Method: 9315 - Radiı	IIII-226 ((GFPC)	Count Uncert.	Total Uncert.						
	Result	Qualifier		Uncert. (2σ+/-)		MDC Unit		Prepared	Analyzed	Dil Fa
Analyte	Result	Qualifier	Uncert.	Uncert.		MDC Unit .137 pCi/L		Prepared 11/10/21 10:19		Dil F
Analyte Radium-226	Result 0.0550	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						Dil F
Analyte Radium-226 Carrier	Result 0.0550	Qualifier U	Uncert. (2σ+/-) 0.0804	Uncert. (2σ+/-)				11/10/21 10:19 Prepared	12/03/21 10:22	
Analyte Radium-226 Carrier Ba Carrier	Result 0.0550 %Yield 105	Qualifier U Qualifier	Uncert. (2σ+/-) 0.0804	Uncert. (2σ+/-)				11/10/21 10:19 Prepared	12/03/21 10:22 Analyzed	
Analyte Radium-226 Carrier Ba Carrier	Result 0.0550 %Yield 105	Qualifier U Qualifier	Uncert. (2σ+/-) 0.0804	Uncert. (2σ+/-)				11/10/21 10:19 Prepared	12/03/21 10:22 Analyzed	
Analyte Radium-226 Carrier Ba Carrier	Result 0.0550 %Yield 105	Qualifier U Qualifier	Uncert. (2σ+/-) 0.0804 Limits 40 - 110	Uncert. (2σ+/-) 0.0806				11/10/21 10:19 Prepared	12/03/21 10:22 Analyzed	
Analyte Radium-226 Carrier Ba Carrier Method: 9320 - Radiu	Result 0.0550	Qualifier U Qualifier	Uncert. (20+/-) 0.0804 Limits 40 - 110 Count	Uncert. (2σ+/-) 0.0806	1.00 0			11/10/21 10:19 Prepared	12/03/21 10:22 Analyzed	Dil F
Analyte Radium-226 Carrier Ba Carrier Method: 9320 - Radiu	Result 0.0550	Qualifier U Qualifier GFPC	Uncert. (2σ+/-) 0.0804 Limits 40 - 110 Count Uncert.	Uncert. (2σ+/-) 0.0806 Total Uncert.	1.00 0	.137 pCi/L	_	11/10/21 10:19 Prepared 11/10/21 10:19	12/03/21 10:22 Analyzed 12/03/21 10:22 Analyzed	Dil F
Method: 9315 - Radiu Analyte Radium-226 Carrier Ba Carrier Method: 9320 - Radiu Analyte Radium-228 Carrier	Result 0.0550 %Yield 105 um-228 (Result 0.494	Qualifier Qualifier GFPC) Qualifier	Uncert. (2σ+/-) 0.0804 Limits 40 - 110 Count Uncert. (2σ+/-)	Uncert. (2σ+/-) 0.0806 Total Uncert. (2σ+/-)	1.00 0	.137 pCi/L	_	11/10/21 10:19 Prepared 11/10/21 10:19 Prepared	12/03/21 10:22 Analyzed 12/03/21 10:22 Analyzed	

11/10/21 10:58 11/24/21 17:04

40 - 110

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12

Client: Haley & Aldrich, Inc. Job ID: 180-129538-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-7S

Lab Sample ID: 180-129538-1 Date Collected: 11/03/21 10:30

Matrix: Water

Date Received: 11/04/21 14:15

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.549		0.257	0.261	5.00	0.360	pCi/L	<u> </u>	12/08/21 21:34	1
226 + 228										

Client Sample ID: WAP-7D Lab Sample ID: 180-129538-2

Date Collected: 11/03/21 11:10 **Matrix: Water**

Date Received: 11/04/21 14:15

Method: FPA 9056A - Anions, Ion Chromatography

Method. Li A 3030A - A	Amons, fon omomatography							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	180	2.5	1.8	mg/L			11/05/21 20:36	2.5
Fluoride	0.40	0.25	0.065	mg/L			11/05/21 20:36	2.5
Sulfate	1200	25	19	mg/L			11/05/21 20:52	25

Method: EPA 6020A - Metals	(ICP/MS) - Total Recoverable
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Analyte	Result Q	Qualifier RL			Method. EPA 6020A - Metals (ICP/MS) - Total Recoverable											
		Rualillei NL	MDL	Unit	D	Prepared	Analyzed	Dil Fac								
Antimony	ND	0.0020	0.00038	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Arsenic	0.0011	0.0010	0.00031	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Barium	0.045	0.010	0.0016	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Beryllium	ND	0.0010	0.00018	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Boron	14	0.80	0.39	mg/L		11/12/21 11:00	11/17/21 13:19	10								
Cadmium	ND	0.0010	0.00022	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Calcium	450	5.0	1.3	mg/L		11/12/21 11:00	11/17/21 13:19	10								
Chromium	ND	0.0020	0.0015	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Cobalt	0.0068	0.00050	0.00013	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Lead	ND	0.0010	0.00013	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Lithium	0.063	0.0050	0.0034	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Molybdenum	0.29	0.0050	0.00061	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Selenium	ND	0.0050	0.0015	mg/L		11/12/21 11:00	11/13/21 19:33	1								
Thallium	0.00016 J	0.0010	0.00015	mg/L		11/12/21 11:00	11/13/21 19:33	1								

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013 mg/L		11/09/21 06:16	11/10/21 10:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2000		20	20	mg/L			11/08/21 17:25	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
nH	7.3	HE	0.1	0.1	SU			11/06/21 08:32	1

Method: 9315 - Ra	adium-226 (GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.595		0.178	0.186	1.00	0.176	pCi/L	11/10/21 10:19	12/03/21 10:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					11/10/21 10:19	12/03/21 10:22	1

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Client Sample Results

Client: Haley & Aldrich, Inc.

Job ID: 180-129538-1

Project/Site: CCR Groundwater Monitoring FB Culley

Client Sample ID: WAP-7D

Lab Sample ID: 180-129538-2

Matrix: Water

Date Collected: 11/03/21 11:10 Date Received: 11/04/21 14:15

Method: 9320 - F	Radium-228 ((GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.05		0.347	0.360	1.00	0.452	pCi/L	11/10/21 10:58	11/24/21 17:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.5		40 - 110					11/10/21 10:58	11/24/21 17:04	1
Y Carrier	96.1		40 - 110					11/10/21 10:58	11/24/21 17:04	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.64		0.390	0.405	5.00	0.452	pCi/L		12/08/21 21:34	1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-377721/10 **Client Sample ID: Method Blank**

Matrix: Water

Analyte

Chloride

Fluoride

Sulfate

Analysis Batch: 377721

Prep Type: Total/NA

MB MB Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac D ND 1.0 0.71 mg/L 11/05/21 13:00 ND 0.10 0.026 mg/L 11/05/21 13:00 ND 1.0 0.76 mg/L 11/05/21 13:00

Lab Sample ID: LCS 180-377721/9 **Client Sample ID: Lab Control Sample**

Matrix: Water

Analysis Batch: 377721

Prep Type: Total/NA

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Chloride 80 - 120 50.0 50.1 mg/L 100 Fluoride 2.50 2.54 mg/L 101 80 - 120 Sulfate 50.0 mg/L 50.7 101 80 - 120

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

Lab Sample ID: MB 180-378431/1-A

Matrix: Water

Analysis Batch: 378981

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

Prep Batch: 378431

,									
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/12/21 11:00	11/13/21 17:51	1
Arsenic	ND		0.0010	0.00031	mg/L		11/12/21 11:00	11/13/21 17:51	1
Barium	ND		0.010	0.0016	mg/L		11/12/21 11:00	11/13/21 17:51	1
Beryllium	ND		0.0010	0.00018	mg/L		11/12/21 11:00	11/13/21 17:51	1
Boron	ND		0.080	0.039	mg/L		11/12/21 11:00	11/13/21 17:51	1
Cadmium	ND		0.0010	0.00022	mg/L		11/12/21 11:00	11/13/21 17:51	1
Chromium	ND		0.0020	0.0015	mg/L		11/12/21 11:00	11/13/21 17:51	1
Cobalt	ND		0.00050	0.00013	mg/L		11/12/21 11:00	11/13/21 17:51	1
Lead	ND		0.0010	0.00013	mg/L		11/12/21 11:00	11/13/21 17:51	1
Lithium	ND		0.0050	0.0034	mg/L		11/12/21 11:00	11/13/21 17:51	1
Molybdenum	ND		0.0050	0.00061	mg/L		11/12/21 11:00	11/13/21 17:51	1
Selenium	ND		0.0050	0.0015	mg/L		11/12/21 11:00	11/13/21 17:51	1
Thallium	ND		0.0010	0.00015	mg/L		11/12/21 11:00	11/13/21 17:51	1

Lab Sample ID: MB 180-378431/1-A

Matrix: Water

Analysis Batch: 379323

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 378431

Analyte RL **MDL** Unit Result Qualifier Prepared Analyzed Dil Fac Calcium ND 0.50 0.13 mg/L 11/12/21 11:00 11/17/21 12:57

MB MB

Lab Sample ID: LCS 180-378431/2-A

Matrix: Water

Analysis Batch: 378981

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

Prep Batch: 378431

	•	Spike	LCS	LCS				%Rec.	
4	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ā	Antimony	0.250	0.246		mg/L		98	80 - 120	
1	Arsenic	1.00	1.01		mg/L		101	80 - 120	
E	Barium	1.00	1.01		mg/L		101	80 - 120	
E	Beryllium	0.500	0.477		mg/L		95	80 - 120	

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Job ID: 180-129538-1

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

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

Lab Sample ID: LCS 180-378431/2-A **Matrix: Water**

Analysis Batch: 378981

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 378431

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits Boron 1.25 1.09 mg/L 87 80 - 120 0.500 Cadmium 0.507 mg/L 101 80 - 1200.500 0.501 100 80 - 120 Chromium mg/L 0.500 Cobalt 0.515 mg/L 103 80 - 120 Lead 0.500 0.503 mg/L 101 80 - 120 Lithium 0.500 0.479 mg/L 96 80 - 120 Molybdenum 0.500 0.514 mg/L 103 80 - 120 Selenium 1.00 0.980 mg/L 98 80 - 120 Thallium 1.00 1.05 mg/L 105 80 - 120

LCS LCS

Lab Sample ID: LCS 180-378431/2-A

Matrix: Water

Analysis Batch: 379323

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

Prep Batch: 378431 %Rec.

Spike Analyte Added Result Qualifier Unit %Rec Limits Calcium 25.0 28.6 mg/L 114 80 - 120

Lab Sample ID: 180-129538-1 MS

Matrix: Water

Analysis Batch: 378981

Client Sample ID: WAP-7S Prep Type: Total Recoverable Prep Batch: 378431

Allalysis Datell. 370301									Fieb Datcii. 3/0431
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	0.0014	J	0.250	0.241		mg/L		96	75 - 125
Arsenic	0.0083		1.00	1.01		mg/L		100	75 - 125
Barium	0.032		1.00	1.01		mg/L		98	75 - 125
Beryllium	ND		0.500	0.464		mg/L		93	75 - 125
Cadmium	ND		0.500	0.486		mg/L		97	75 - 125
Chromium	ND		0.500	0.492		mg/L		98	75 - 125
Cobalt	0.00016	J	0.500	0.508		mg/L		102	75 - 125
Lead	0.00022	J	0.500	0.490		mg/L		98	75 - 125
Lithium	0.13		0.500	0.590		mg/L		91	75 - 125
Molybdenum	0.17		0.500	0.677		mg/L		102	75 - 125
Selenium	ND		1.00	0.939		mg/L		94	75 - 125
Thallium	0.00038	J	1.00	1.01		mg/L		101	75 - 125

Lab Sample ID: 180-129538-1 MS

Matrix: Water

Analysis Batch: 379323

Client Sample ID: WAP-7S Prep Type: Total Recoverable

Prep Batch: 378431

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Boron	16		1.25	17.3	4	mg/L		97	75 - 125	
Calcium	150		25.0	182	4	mg/L		109	75 - 125	

Lab Sample ID: 180-129538-1 MSD

Matrix: Water

Client Sample ID: WAP-7S Prep Type: Total Recoverable

Analysis Batch: 378981									Prep Ba	atch: 3	78431
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.0014	J	0.250	0.239		mg/L		95	75 - 125	1	20
Arsenic	0.0083		1.00	1.01		mg/L		100	75 - 125	0	20

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Prep Batch: 378157

Prep Type: Total/NA

Prep Batch: 378157

Project/Site: CCR Groundwater Monitoring FB Culley

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

Lab Sample ID: 180-129538-1 MSD **Client Sample ID: WAP-7S Matrix: Water Prep Type: Total Recoverable** Analysis Batch: 378981 **Prep Batch: 378431**

Alluly 313 Butchi. 07 0001									1 TOP DO	1011. 0	0401
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Barium	0.032		1.00	0.995		mg/L		96	75 - 125	1	20
Beryllium	ND		0.500	0.464		mg/L		93	75 - 125	0	20
Cadmium	ND		0.500	0.486		mg/L		97	75 - 125	0	20
Chromium	ND		0.500	0.486		mg/L		97	75 - 125	1	20
Cobalt	0.00016	J	0.500	0.507		mg/L		101	75 - 125	0	20
Lead	0.00022	J	0.500	0.487		mg/L		97	75 - 125	1	20
Lithium	0.13		0.500	0.588		mg/L		91	75 - 125	0	20
Molybdenum	0.17		0.500	0.671		mg/L		101	75 - 125	1	20
Selenium	ND		1.00	0.943		mg/L		94	75 - 125	0	20
Thallium	0.00038	J	1.00	0.996		mg/L		100	75 - 125	1	20

Lab Sample ID: 180-129538-1 MSD **Client Sample ID: WAP-7S Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 379323									Prep Ba	itch: 37	78431
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	16		1.25	17.8	4	mg/L		138	75 - 125	3	20
Calcium	150		25.0	185	4	mg/L		122	75 - 125	2	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-378157/1-A **Client Sample ID: Method Blank** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 378424

мв мв

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 0.00020 0.00013 mg/L 11/09/21 06:16 11/10/21 10:43 Mercury

Lab Sample ID: LCS 180-378157/2-A **Client Sample ID: Lab Control Sample**

Matrix: Water

Analysis Batch: 378424

LCS LCS Spike Analyte Added Result Qualifier Unit

%Rec. D %Rec Limits 0.00250 0.00246 98 80 - 120 Mercury mg/L

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-377921/1 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 377921

Alialysis Datcil. 311321								
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
nH	7 00	7.0		SU		100	99 _ 101	

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Job ID: 180-129538-1

Client Sample ID: Method Blank

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

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

Lab Sample ID: MB 180-378127/2

Matrix: Water

Analysis Batch: 378127

Prep Type: Total/NA

MB MB

Result Qualifier RL **MDL** Unit Analyzed Dil Fac Analyte D Prepared 10 10 mg/L 11/08/21 17:25 **Total Dissolved Solids** ND

Lab Sample ID: LCS 180-378127/1 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 378127

Spike LCS LCS %Rec. Added Result Qualifier Unit D %Rec Limits Analyte 422 **Total Dissolved Solids** 376 mg/L 89 80 - 120

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-535811/23-A Client Sample ID: Method Blank **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 540016

Total Count MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 0.1409 U 0.108 0.108 1.00 0.157 pCi/L 11/10/21 10:19 12/03/21 11:09

MB MB

Carrier Qualifier Limits %Yield Prepared Analyzed Dil Fac Ba Carrier 92.2 40 - 110 11/10/21 10:19 12/03/21 11:09

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 160-535811/1-A

Matrix: Water Prep Type: Total/NA **Analysis Batch: 540040 Prep Batch: 535811** Total

LCS LCS %Rec. Spike Uncert. Added Analyte Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits Radium-226 15.1 1.27 12.06 1.00 0.142 pCi/L 80 75 - 125

LCS LCS

Carrier %Yield Qualifier Limits 105 Ba Carrier 40 - 110

Analysis Batch: 540040

Lab Sample ID: LCSD 160-535811/2-A Client Sample ID: Lab Control Sample Dup **Matrix: Water** Prep Type: Total/NA **Prep Batch: 535811**

Total

Spike LCSD LCSD Uncert. %Rec. **RER** (2σ+/-) Analyte Added Result Qual RL**MDC** Unit %Rec Limits RER Limit Radium-226 15.1 13.10 1.36 1.00 0.154 pCi/L 87 75 - 125 0.40

LCSD LCSD Carrier **%Yield Qualifier** Limits Ba Carrier 104 40 - 110

Eurofins TestAmerica, Pittsburgh

10

Prep Batch: 535811

Client: Haley & Aldrich, Inc. Job ID: 180-129538-1

Count

Project/Site: CCR Groundwater Monitoring FB Culley

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-535814/23-A

Matrix: Water

Analysis Batch: 538451

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 535814

	MB	MB	Uncert.	Uncert.					
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Un	it Prepared	Analyzed	Dil Fac
Radium-228	0.1380	U	0.350	0.350	1.00	0.600 pC	i/L 11/10/21 10:58	11/24/21 17:10	1

Total

	MB	MB				
Carrier	%Yield	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba Carrier	92.2		40 - 110	11/10/21 10:58	11/24/21 17:10	1
Y Carrier	96.1		40 - 110	11/10/21 10:58	11/24/21 17:10	1

Lab Sample ID: LCS 160-535814/1-A **Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total/NA**

Analysis Batch: 538449

Prep Batch: 535814 Total

Spike LCS LCS Uncert. %Rec. Analyte Added Result Qual $(2\sigma + / -)$ RL MDC Unit %Rec Limits 75 - 125 Radium-228 1.11 1.00 0.407 pCi/L 12.2 9.179 76

LCS LCS

Carrier	%Yield	Qualifier	Limits
Ba Carrier	105		40 - 110
Y Carrier	93.5		40 - 110

Lab Sample ID: LCSD 160-535814/2-A **Client Sample ID: Lab Control Sample Dup**

Matrix: Water

Analysis Batch: 538449

Prep Type: Total/NA Prep Batch: 535814

-				Total							
	Spike	LCSD	LCSD	Uncert.					%Rec.		RER
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC	Unit	%Rec	Limits	RER	Limit
Radium-228	12.2	9.632		1.17	1.00	0.481	pCi/L	79	75 - 125	0.20	1

	LCSD	LCSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	93.5		40 - 110

12/9/2021

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

HPLC/IC

Analysis Batch: 377721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129538-1	WAP-7S	Total/NA	Water	EPA 9056A	
180-129538-1	WAP-7S	Total/NA	Water	EPA 9056A	
180-129538-2	WAP-7D	Total/NA	Water	EPA 9056A	
180-129538-2	WAP-7D	Total/NA	Water	EPA 9056A	
MB 180-377721/10	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-377721/9	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 378157

Lab Sample ID 180-129538-1	Client Sample ID WAP-7S	Prep Type Total/NA	Matrix Water	Method 7470A	Prep Batch
180-129538-2	WAP-7D	Total/NA	Water	7470A	
MB 180-378157/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-378157/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 378424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129538-1	WAP-7S	Total/NA	Water	EPA 7470A	378157
180-129538-2	WAP-7D	Total/NA	Water	EPA 7470A	378157
MB 180-378157/1-A	Method Blank	Total/NA	Water	EPA 7470A	378157
LCS 180-378157/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	378157

Prep Batch: 378431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129538-1	WAP-7S	Total Recoverable	Water	3005A	
180-129538-2	WAP-7D	Total Recoverable	Water	3005A	
MB 180-378431/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-378431/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-129538-1 MS	WAP-7S	Total Recoverable	Water	3005A	
180-129538-1 MSD	WAP-7S	Total Recoverable	Water	3005A	

Analysis Batch: 378981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129538-1	WAP-7S	Total Recoverable	Water	EPA 6020A	378431
180-129538-2	WAP-7D	Total Recoverable	Water	EPA 6020A	378431
MB 180-378431/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	378431
LCS 180-378431/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	378431
180-129538-1 MS	WAP-7S	Total Recoverable	Water	EPA 6020A	378431
180-129538-1 MSD	WAP-7S	Total Recoverable	Water	EPA 6020A	378431

Analysis Batch: 379323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129538-1	WAP-7S	Total Recoverable	Water	EPA 6020A	378431
180-129538-2	WAP-7D	Total Recoverable	Water	EPA 6020A	378431
MB 180-378431/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	378431
LCS 180-378431/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	378431
180-129538-1 MS	WAP-7S	Total Recoverable	Water	EPA 6020A	378431
180-129538-1 MSD	WAP-7S	Total Recoverable	Water	EPA 6020A	378431

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Job ID: 180-129538-1

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring FB Culley

General Chemistry

Analysis Batch: 377921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129538-1	WAP-7S	Total/NA	Water	EPA 9040C	
180-129538-2	WAP-7D	Total/NA	Water	EPA 9040C	
LCS 180-377921/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 378127

Lab Sample ID 180-129538-1	Client Sample ID WAP-7S	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
180-129538-2	WAP-7D	Total/NA	Water	SM 2540C	
MB 180-378127/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-378127/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 535811

Lab Sample ID 180-129538-1	Client Sample ID WAP-7S	Prep Type Total/NA	Matrix Water	Method PrecSep-21	Prep Batch
180-129538-2	WAP-7D	Total/NA	Water	PrecSep-21	
MB 160-535811/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-535811/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-535811/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 535814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129538-1	WAP-7S	Total/NA	Water	PrecSep_0	· ——·
180-129538-2	WAP-7D	Total/NA	Water	PrecSep_0	
MB 160-535814/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-535814/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-535814/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep 0	

Job ID: 180-129538-1

Eurofins TestAmerica, Pittsburgh

301 Alpha Drive RIDC Park

Chain of Custody Record

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hone: 412-963-7058 Fax: 412-963-2468	Sampler:	1/	7 /	Lab PI				-	Carrier T	racking No(s):		COC No:	
Client Information	Phone:			Haye E-Mail	s, Ken		1		State of 0	Origin:		180-75297-1450 Page:	5.1
Mark Breting	317.4	73.13			Hayes@E	urofin	set.com		State of C	JA	<u>ر</u>	Page 1 of 2	
ompany: utlas Technical Consultants LLC			PWSID:					Analysis	Requeste	d		Job #:	
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988 Centerpoint Drive Suite 100 ity:	TAT Requested (da	ne).			i .	1				11		A-HCL	M - Hexane
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tate, Zip: N, 46256	Compliance Projec	t A Yes	A No.								9	D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3
hone:	PO#:		110					1 1		F - MeOH G - Amchlor	R - Na2S2O3 S - H2SO4		
64-214-8750(Tel) mail:	FB-242026. AB- wo#:	241410			<u>ē</u>				1 [1		i	H - Ascorbic Acid	T - TSP Dodecatydrai
maii: nark.breting@atcassociates.com	VVO #:				स्मे दिह े							I - Ice J - DI Water	U - Acetone V - MCAA
roject Name:	Project #:								1 1 1			K - EDTA L - EDA	W - pH 4-5 Z - other (specify)
CCR Groundwater Monitoring FB Culley lite:	18016014 ssow#:				SUMPLOYAL	'] Ja221					Other:	
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			Туре	(W=wzter, S=solid.		4	S S		1 1 1			Ž.	
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab) s	S=solid, O=waste/oil, F=Tissue, A=Air)	TIGIT I	6020A,	2 2					3	rs/Note:
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Non-Hazard Flammable Skin Irrital Deliverable Requested: I, II, III, IV, Other (specify)	nt Poison B Unkr	iown	Radiological					ent QC Requ	Ulsposa irements:	By Lab		rchive For	<u>Months</u>
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Custody Seals Intact: Custody Seal No.:					c	_					_		

/er: 06/08/2021

Client: Haley & Aldrich, Inc.

Job Number: 180-129538-1

Login Number: 129538

List Number: 1

Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

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	

Job Number: 180-129538-1

Login Number: 129538

List Number: 2

Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

List Creation: 11/08/21 03:15 PM

oreator. Norminizer, witcha 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	

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-129641-1

Client Project/Site: CCR Groundwater Monitoring Culley West

For:

Haley & Aldrich, Inc. 465 Medford St Suite 2200 Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Kuntll Haye

Authorized for release by: 12/14/2021 3:22:30 PM

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@Eurofinset.com

-----LINKS

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Have a Question?



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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Project/Site: CCR Groundwater Monitoring Culley West

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring Culley West

Job ID: 180-129641-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-129641-1

Comments

No additional comments.

Receipt

The samples were received on 11/6/2021 9:30 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 was 4.2° C.

GC Semi VOA

Method 9056A: The matrix spike duplicate (MSD) recoveries for analytical batch 180-378057 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 9056A: The sample duplicate precision for the following sample associated with analytical batch 180-378057 was outside control limits: CCR-AP-7 (180-129641-3[MSD]). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

Method 9056A: The sample duplicate precision for the following sample associated with analytical batch 180-378057 was outside control limits: CCR-AP-7 (180-129641-3[MSD]). Non-homogeneity of the sample matrix is suspected. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision met acceptance criteria.

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

RAD

Methods 903.0, 9315: Radium-226 prep batch 160-536422:

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 (180-129641-1), WAP-2R (180-129641-2), CCR-AP-7 (180-129641-3), CCR-AP-7 (180-129641-3[DU]), (LCS 160-536422/1-A) and (MB 160-536422/23-A)

Methods 904.0, 9320: Radium 228 batch 536427

The detection goal was not met. Samples were prepped at a reduced volume due to the presence of matrix interferences: WAP-1 (180-129641-1) and WAP-2R (180-129641-2). Analytical results are reported with the detection limit achieved.

Methods 904.0. 9320: Radium 228 batch 536427

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 (180-129641-1), WAP-2R (180-129641-2), CCR-AP-7 (180-129641-3), CCR-AP-7 (180-129641-3[DU]), (LCS 160-536427/1-A) and (MB 160-536427/23-A)

Method PrecSep-21: Radium-226 Prep Batch 160-536422

The following samples were prepared at a reduced aliquot due to Matrix: CCR-AP-7 (180-129641-3[DU]). A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

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

Method SM 2540C: The following sample was analyzed outside of analytical holding time due to analyst error. CCR-AP-7 (180-129641-3[DU]).

Job ID: 180-129641-1

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring Culley West

Job ID: 180-129641-1 (Continued)

Laboratory: Eurofins TestAmerica, Pittsburgh (Continued)

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

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Job ID: 180-129641-1

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-129641-1

Project/Site: CCR Groundwater Monitoring Culley West

Qualifiers

 Qualifier
 Qualifier Description

 F1
 MS and/or MSD recovery exceeds control limits.

F2 MS/MSD RPD exceeds control limits

Metals

Qualifier Qualifier Description

MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not

pplicable

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

H Sample was prepped or analyzed beyond the specified holding time

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

Rad

Qualifier Qualifier Description

G The Sample MDC is greater than the requested RL.

U Result is less than the sample detection limit.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

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 TestAmerica, Pittsburgh

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II.

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring Culley West

Laboratory: Eurofins TestAmerica, 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	04-30-22
Connecticut	State	PH-0688	09-30-22
Florida	NELAP	E871008	06-30-22
Georgia	State	PA 02-00416	04-30-22
Illinois	NELAP	004375	06-30-22
Kansas	NELAP	E-10350	01-31-22
Kentucky (UST)	State	162013	04-30-22
Kentucky (WW)	State	KY98043	12-31-21
Louisiana	NELAP	04041	06-30-22
Maine	State	PA00164	03-06-22
Minnesota	NELAP	042-999-482	12-31-21
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	04-05-22
New Jersey	NELAP	PA005	06-30-22
New York	NELAP	11182	04-01-22
North Carolina (WW/SW)	State	434	12-31-21
North Dakota	State	R-227	04-30-22
Oregon	NELAP	PA-2151	02-06-22
Pennsylvania	NELAP	02-00416	04-30-22
Rhode Island	State	LAO00362	12-31-21
South Carolina	State	89014	04-30-22
Texas	NELAP	T104704528	03-31-22
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-22
Virginia	NELAP	10043	09-15-22
West Virginia DEP	State	142	01-31-22
Wisconsin	State	998027800	08-31-22

Laboratory: Eurofins TestAmerica, 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	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	06-30-21 *
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	01-01-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-21

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

Eurofins TestAmerica, Pittsburgh

Job ID: 180-129641-1

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring Culley West

Laboratory: Eurofins TestAmerica, 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	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-21
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-22
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	03-01-22
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

Job ID: 180-129641-1

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Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-129641-1	WAP-1	Water	11/04/21 09:00	11/06/21 09:30
180-129641-2	WAP-2R	Water	11/04/21 10:50	11/06/21 09:30
180-129641-3	CCR-AP-7	Water	11/04/21 12:00	11/06/21 09:30

Job ID: 180-129641-1

Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring Culley West

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
EPA 9040C	рН	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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.

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

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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

Job ID: 180-129641-1

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Lab Chronicle

Client: Haley & Aldrich, Inc.

Job ID: 180-129641-1

Project/Site: CCR Groundwater Monitoring Culley West

Client Sample ID: WAP-1 Lab Sample ID: 180-129641-1

Date Collected: 11/04/21 09:00 Matrix: Water Date Received: 11/06/21 09:30

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type Total/NA	- Type Analysis	- Method EPA 9056A	Run	Factor 1	Amount	Amount	Number 378057	or Analyzed 11/08/21 15:30	Analyst JRB	- Lab TAL PIT
	Instrumen	t ID: CHICS2100B								
Total/NA	Analysis Instrumen	EPA 9056A at ID: CHICS2100B		5			378057	11/08/21 15:46	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378725	11/12/21 09:25	RGM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: DORY		1			379151	11/13/21 12:32	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378157	11/09/21 06:16	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			378424	11/10/21 10:51	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			378228	11/09/21 11:40	MJH	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	378299	11/09/21 16:49	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			500.56 mL	1.0 g	536422	11/12/21 13:18	LPS	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCBLUE		1			540407	12/06/21 17:05	ANW	TAL SL
Total/NA	Prep	PrecSep_0			500.56 mL	1.0 g	536427	11/12/21 14:30	LPS	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCPROTEA	ΑN	1			539783	12/01/21 14:27	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			542122	12/14/21 14:37	CAH	TAL SL

Client Sample ID: WAP-2R
Date Collected: 11/04/21 10:50

Lab Sample ID: 180-129641-2
Matrix: Water

Date Received: 11/06/21 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 Instrument	EPA 9056A t ID: CHICS2100B		1			378057	11/08/21 16:03	JRB	TAL PIT
Total/NA	Analysis Instrument	EPA 9056A t ID: CHICS2100B		5			378057	11/08/21 16:19	JRB	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	378725	11/12/21 09:25	RGM	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: DORY		1			379151	11/13/21 12:35	RJR	TAL PIT
Total/NA	Prep	7470A			25 mL	25 mL	378157	11/09/21 06:16	RJR	TAL PIT
Total/NA	Analysis Instrument	EPA 7470A t ID: HGY		1			378424	11/10/21 10:48	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: NOEQUIP		1			378228	11/09/21 11:43	MJH	TAL PIT
Total/NA	Analysis Instrument	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	378299	11/09/21 16:49	KMM	TAL PIT
Total/NA	Prep	PrecSep-21			249.81 mL	1.0 g	536422	11/12/21 13:18	LPS	TAL SL
Total/NA	Analysis Instrument	9315 t ID: GFPCBLUE		1			540407	12/06/21 17:05	ANW	TAL SL

Eurofins TestAmerica, Pittsburgh

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estAmerica, Pittsburgh

Lab Chronicle

Client: Haley & Aldrich, Inc. Job ID: 180-129641-1

Project/Site: CCR Groundwater Monitoring Culley West

Client Sample ID: WAP-2R Lab Sample ID: 180-129641-2

Date Collected: 11/04/21 10:50 Matrix: Water

Date Received: 11/06/21 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_0			249.81 mL	1.0 g	536427	11/12/21 14:30	LPS	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCPROTE	AN	1			539783	12/01/21 14:27	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			542122	12/14/21 14:37	CAH	TAL SL

Client Sample ID: CCR-AP-7 Lab Sample ID: 180-129641-3

Date Collected: 11/04/21 12:00 East Sample 1B. 160-129041-3

Date Received: 11/06/21 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 at ID: CHICS2100B		1			378057	11/08/21 14:25	JRB	TAL PI
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A It ID: DORY		1	50 mL	50 mL	378725 379151	11/12/21 09:25 11/13/21 12:49		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A tt ID: HGY		1	25 mL	25 mL	378157 378424	11/09/21 06:16 11/10/21 10:45		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: NOEQUIP		1			378228	11/09/21 11:23	MJH	TAL PI
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	378299	11/09/21 16:49	KMM	TAL PI
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCPURPLE		1	750.13 mL	1.0 g	536422 540406	11/12/21 13:18 12/06/21 17:06		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 It ID: GFPCPROTEA	.N	1	750.13 mL	1.0 g	536427 539783	11/12/21 14:30 12/01/21 14:28		TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			542122	12/14/21 14:37	CAH	TAL SL

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058 TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

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Lab Chronicle

Client: Haley & Aldrich, Inc.

Job ID: 180-129641-1

Project/Site: CCR Groundwater Monitoring Culley West

Analyst References:

Lab: TAL PIT

Batch Type: Prep

RGM = Rebecca Manns

RJR = Ron Rosenbaum

Batch Type: Analysis

JRB = James Burzio

KMM = Kendric Moore

MJH = Michael Houde

RJR = Ron Rosenbaum

Lab: TAL SL

Batch Type: Prep

LPS = Lauren Szostak

Batch Type: Analysis

ANW = Aamber Woods

CAH = Chris Hough

FLC = Fernando Cruz

- I- ID: 400 400044 4

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Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring Culley West

Client Sample ID: WAP-1 Date Collected: 11/04/21 09:00 Lab Sample ID: 180-129641-1

Matrix: Water

Job ID: 180-129641-1

Date Received: 11/06/21 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37		1.0	0.71	mg/L			11/08/21 15:30	1
Fluoride	0.45		0.10	0.026	mg/L			11/08/21 15:30	1
Sulfate	330		5.0	3.8	mg/L			11/08/21 15:46	5
- Method: EPA 6020A - N	Metals (ICP/MS) - To	otal Recove	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/12/21 09:25	11/13/21 12:32	1
Arsenic	0.0041		0.0010	0.00031	mg/L		11/12/21 09:25	11/13/21 12:32	1
Barium	0.41		0.010	0.0016	mg/L		11/12/21 09:25	11/13/21 12:32	1
Beryllium	ND		0.0010	0.00018	mg/L		11/12/21 09:25	11/13/21 12:32	1
Boron	0.081		0.080	0.039	mg/L		11/12/21 09:25	11/13/21 12:32	1
Cadmium	ND		0.0010	0.00022	mg/L		11/12/21 09:25	11/13/21 12:32	1
Calcium	180		0.50	0.13	mg/L		11/12/21 09:25	11/13/21 12:32	1
Chromium	0.0033		0.0020	0.0015	mg/L		11/12/21 09:25	11/13/21 12:32	1
Cobalt	0.0017		0.00050	0.00013	mg/L		11/12/21 09:25	11/13/21 12:32	1
Lead	0.0023		0.0010	0.00013	mg/L		11/12/21 09:25	11/13/21 12:32	1
Lithium	0.0061		0.0050	0.0034	mg/L		11/12/21 09:25	11/13/21 12:32	1
Molybdenum	0.00070	J	0.0050	0.00061	mg/L		11/12/21 09:25	11/13/21 12:32	1
Selenium	ND		0.0050	0.0015	mg/L		11/12/21 09:25	11/13/21 12:32	1
Thallium	ND		0.0010	0.00015	mg/L		11/12/21 09:25	11/13/21 12:32	1
- Method: EPA 7470A - N	flercury (CVAA)								
Analyte	• • •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
				0.00040			11/00/01 00 15	11/10/01 10 51	

Mercury	ND		0.00020	0.00013	mg/L		11/09/21 06:16	11/10/21 10:51	1
General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	930		10		mg/L	— <u> </u>		11/09/21 16:49	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.1	HF	0.1	0.1	SU			11/09/21 11:40	1

Method: 9315 - F	Radium-226 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.706		0.345	0.351	1.00	0.444	pCi/L	11/12/21 13:18	12/06/21 17:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.4		40 - 110					11/12/21 13:18	12/06/21 17:05	1

Method: 9320 - I	Radium-228 (GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.264	UG	0.840	0.840	1.00	1.46	pCi/L	11/12/21 14:30	12/01/21 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.4		40 - 110					11/12/21 14:30	12/01/21 14:27	1
Y Carrier	82.6		40 - 110					11/12/21 14:30	12/01/21 14:27	1

Client: Haley & Aldrich, Inc. Job ID: 180-129641-1

Project/Site: CCR Groundwater Monitoring Culley West

Lab Sample ID: 180-129641-1 **Client Sample ID: WAP-1**

Date Collected: 11/04/21 09:00 **Matrix: Water** Date Received: 11/06/21 09:30

Method: Ra226_	Ra228 - Combined	Radium-226 an	d Radium-228
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_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.970	U	0.908	0.910	5.00	1.46	pCi/L		12/14/21 14:37	1

Lab Sample ID: 180-129641-2 **Client Sample ID: WAP-2R** Date Collected: 11/04/21 10:50 **Matrix: Water**

Date Received: 11/06/21 09:30

Method: EPA 9056A - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	92		1.0	0.71	mg/L			11/08/21 16:03	1
Fluoride	0.36		0.10	0.026	mg/L			11/08/21 16:03	1
Sulfate	350		5.0	3.8	mg/L			11/08/21 16:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/12/21 09:25	11/13/21 12:35	1
Arsenic	0.0013		0.0010	0.00031	mg/L		11/12/21 09:25	11/13/21 12:35	1
Barium	0.057		0.010	0.0016	mg/L		11/12/21 09:25	11/13/21 12:35	1
Beryllium	ND		0.0010	0.00018	mg/L		11/12/21 09:25	11/13/21 12:35	1
Boron	8.3		0.080	0.039	mg/L		11/12/21 09:25	11/13/21 12:35	1
Cadmium	0.00042	J	0.0010	0.00022	mg/L		11/12/21 09:25	11/13/21 12:35	1
Calcium	170		0.50	0.13	mg/L		11/12/21 09:25	11/13/21 12:35	1
Chromium	ND		0.0020	0.0015	mg/L		11/12/21 09:25	11/13/21 12:35	1
Cobalt	0.0028		0.00050	0.00013	mg/L		11/12/21 09:25	11/13/21 12:35	1
Lead	0.00059	J	0.0010	0.00013	mg/L		11/12/21 09:25	11/13/21 12:35	1
Lithium	0.026		0.0050	0.0034	mg/L		11/12/21 09:25	11/13/21 12:35	1
Molybdenum	0.10		0.0050	0.00061	mg/L		11/12/21 09:25	11/13/21 12:35	1
Selenium	ND		0.0050	0.0015	mg/L		11/12/21 09:25	11/13/21 12:35	1
Thallium	ND		0.0010	0.00015	mg/L		11/12/21 09:25	11/13/21 12:35	1

Analyte	Result	Qualifier	KL	MDL	Unit	D	Prepared	Anaiyzed	DII Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/21 06:16	11/10/21 10:48	1

General Chemistry

Analyte	Result	Qualifier	KL	MDL	Unit	D	Prepared	Analyzed	DII Fac
Total Dissolved Solids	870		10	10	mg/L			11/09/21 16:49	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

Method: 9315 - Radium-226 (GFPC)

Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Radium-226	1.00		0.529	0.537	1.00	0.696	pCi/L	11/12/21 13:18	12/06/21 17:05	1
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			Count	iotai						

Ba Carrier 92.2 40 - 110 <u>11/12/21 13:18</u> <u>12/06/21 17:05</u>

Eurofins TestAmerica, Pittsburgh

12/14/2021

Client: Haley & Aldrich, Inc. Job ID: 180-129641-1

Project/Site: CCR Groundwater Monitoring Culley West

Client Sample ID: WAP-2R

Date Collected: 11/04/21 10:50 Date Received: 11/06/21 09:30

Lab Sample ID: 180-129641-2

Matrix: Water

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.15	UG	1.25	1.26	1.00	2.05	pCi/L	11/12/21 14:30	12/01/21 14:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.2		40 - 110					11/12/21 14:30	12/01/21 14:27	1
Y Carrier	85.6		40 - 110					11/12/21 14:30	12/01/21 14:27	1

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

_			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.15		1.36	1.37	5.00	2.05	pCi/L		12/14/21 14:37	1

Client Sample ID: CCR-AP-7

Date Collected: 11/04/21 12:00

Date Received: 11/06/21 09:30

Lab Sample ID: 180-129641-3

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

	•	0 1 3							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32		1.0	0.71	mg/L			11/08/21 14:25	1
Fluoride	0.42		0.10	0.026	mg/L			11/08/21 14:25	1
Sulfate	75		1.0	0.76	mg/L			11/08/21 14:25	1
	Chloride Fluoride	Chloride 32 Fluoride 0.42	Chloride 32 Fluoride 0.42	Chloride 32 1.0 Fluoride 0.42 0.10	Chloride 32 1.0 0.71 Fluoride 0.42 0.10 0.026	Chloride 32 1.0 0.71 mg/L Fluoride 0.42 0.10 0.026 mg/L	Chloride 32 1.0 0.71 mg/L Fluoride 0.42 0.10 0.026 mg/L	Chloride 32 1.0 0.71 mg/L Fluoride 0.42 0.10 0.026 mg/L	Chloride 32 1.0 0.71 mg/L 11/08/21 14:25 Fluoride 0.42 0.10 0.026 mg/L 11/08/21 14:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00038	mg/L		11/12/21 09:25	11/13/21 12:49	1
Arsenic	0.0055		0.0010	0.00031	mg/L		11/12/21 09:25	11/13/21 12:49	1
Barium	0.12		0.010	0.0016	mg/L		11/12/21 09:25	11/13/21 12:49	1
Beryllium	ND		0.0010	0.00018	mg/L		11/12/21 09:25	11/13/21 12:49	1
Boron	0.13		0.080	0.039	mg/L		11/12/21 09:25	11/13/21 12:49	1
Cadmium	ND		0.0010	0.00022	mg/L		11/12/21 09:25	11/13/21 12:49	1
Calcium	110		0.50	0.13	mg/L		11/12/21 09:25	11/13/21 12:49	1
Chromium	ND		0.0020	0.0015	mg/L		11/12/21 09:25	11/13/21 12:49	1
Cobalt	0.00054		0.00050	0.00013	mg/L		11/12/21 09:25	11/13/21 12:49	1
Lead	0.00013	J	0.0010	0.00013	mg/L		11/12/21 09:25	11/13/21 12:49	1
Lithium	0.0096		0.0050	0.0034	mg/L		11/12/21 09:25	11/13/21 12:49	1
Molybdenum	0.0015	J	0.0050	0.00061	mg/L		11/12/21 09:25	11/13/21 12:49	1
Selenium	ND		0.0050	0.0015	mg/L		11/12/21 09:25	11/13/21 12:49	1
Thallium	ND		0.0010	0.00015	mg/L		11/12/21 09:25	11/13/21 12:49	1

Method:	FPΔ 7470Δ.	 Mercury (CVAA 	11
Methou.	LFA / 4/ UM .	- Meiculv (CVA)	1 1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND —	0.00020	0.00013	mg/L		11/09/21 06:16	11/10/21 10:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	530		10	10	mg/L			11/09/21 16:49	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.4	HF	0.1	0.1	SU			11/09/21 11:23	1

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12/14/2021

Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-129641-1

Project/Site: CCR Groundwater Monitoring Culley West

Client Sample ID: CCR-AP-7

Lab Sample ID: 180-129641-3 Date Collected: 11/04/21 12:00

Matrix: Water

Date Received: 11/06/21 09:30

Method: 9315 - F	Radium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.354		0.163	0.166	1.00	0.202	pCi/L	11/12/21 13:18	12/06/21 17:06	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110					11/12/21 13:18	12/06/21 17:06	1

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.313	U	0.407	0.408	1.00	0.677	pCi/L	11/12/21 14:30	12/01/21 14:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.4		40 - 110					11/12/21 14:30	12/01/21 14:28	1
Y Carrier	81.9		40 - 110					11/12/21 14:30	12/01/21 14:28	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.668	U	0.438	0.440	5.00	0.677	pCi/L		12/14/21 14:37	1

Project/Site: CCR Groundwater Monitoring Culley West

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-378057/7

Matrix: Water

Analysis Batch: 378057

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

MB MB
sult Qualifier RI MDI Unit D Prenared Analyzed Dil Fac

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.71	mg/L			11/08/21 13:32	1
Fluoride	ND		0.10	0.026	mg/L			11/08/21 13:32	1
Sulfate	ND		1.0	0.76	mg/L			11/08/21 13:32	1

Lab Sample ID: LCS 180-378057/6

Matrix: Water

Analysis Batch: 378057

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	46.5		mg/L		93	80 - 120	
Fluoride	2.50	2.39		mg/L		96	80 - 120	
Sulfate	50.0	46.4		mg/L		93	80 - 120	

Lab Sample ID: 180-129641-3 MS

Matrix: Water

Analysis Batch: 378057

Client Sample ID: CCR-AP-7
Prep Type: Total/NA

Allalysis Datell. 57 0007										
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	27	F2	250	294		mg/L		107	80 - 120	
Fluoride	0.34	J F2	12.5	13.7		mg/L		107	80 - 120	
Sulfate	66	F1 F2	250	335		mg/L		108	80 - 120	

Lab Sample ID: 180-129641-3 MSD

Matrix: Water

Analysis Batch: 378057

Client Sample ID: CCR-AP-7
Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	27	F2	250	227	F2	mg/L		80	80 - 120	26	15
Fluoride	0.34	J F2	12.5	10.5	F2	mg/L		81	80 - 120	26	15
Sulfate	66	F1 F2	250	257	F1 F2	mg/L		76	80 - 120	26	15

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

Lab Sample ID: MB 180-378725/1-A

Matrix: Water

Analysis Batch: 379151

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 378725

N	IB MB							
Analyte Res	ılt Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ID	0.0020	0.00038	mg/L		11/12/21 09:25	11/13/21 12:18	1
Arsenic 1	ID	0.0010	0.00031	mg/L		11/12/21 09:25	11/13/21 12:18	1
Barium 1	ID	0.010	0.0016	mg/L		11/12/21 09:25	11/13/21 12:18	1
Beryllium !	ID	0.0010	0.00018	mg/L		11/12/21 09:25	11/13/21 12:18	1
Boron 1	ID	0.080	0.039	mg/L		11/12/21 09:25	11/13/21 12:18	1
Cadmium !	ID	0.0010	0.00022	mg/L		11/12/21 09:25	11/13/21 12:18	1
Calcium !	ID	0.50	0.13	mg/L		11/12/21 09:25	11/13/21 12:18	1
Chromium 1	ID	0.0020	0.0015	mg/L		11/12/21 09:25	11/13/21 12:18	1
Cobalt 1	ID	0.00050	0.00013	mg/L		11/12/21 09:25	11/13/21 12:18	1
Lead 1	ID	0.0010	0.00013	mg/L		11/12/21 09:25	11/13/21 12:18	1
Lithium 1	ID	0.0050	0.0034	mg/L		11/12/21 09:25	11/13/21 12:18	1
Molybdenum 1	ID	0.0050	0.00061	mg/L		11/12/21 09:25	11/13/21 12:18	1

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11

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Project/Site: CCR Groundwater Monitoring Culley West

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

Lab Sample ID: MB 180-378725/1-A

Matrix: Water

Analysis Batch: 379151

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 378725

Job ID: 180-129641-1

MB MB Analyte Result Qualifier RL **MDL** Unit **Prepared** Analyzed Dil Fac Selenium ND 0.0050 0.0015 mg/L 11/12/21 09:25 11/13/21 12:18 Thallium ND 0.0010 0.00015 mg/L 11/12/21 09:25 11/13/21 12:18

Lab Sample ID: LCS 180-378725/2-A **Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 379151 Prep Batch: 378725

7 maryolo Batom or or or	Spike	LCS	LCS				%Rec.
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
Antimony	0.250	0.255		mg/L		102	80 - 120
Arsenic	1.00	1.01		mg/L		101	80 - 120
Barium	1.00	1.04		mg/L		104	80 - 120
Beryllium	0.500	0.516		mg/L		103	80 - 120
Boron	1.25	1.18		mg/L		94	80 - 120
Cadmium	0.500	0.513		mg/L		103	80 - 120
Calcium	25.0	29.1		mg/L		116	80 - 120
Chromium	0.500	0.515		mg/L		103	80 - 120
Cobalt	0.500	0.515		mg/L		103	80 - 120
Lead	0.500	0.510		mg/L		102	80 - 120
Lithium	0.500	0.492		mg/L		98	80 - 120
Molybdenum	0.500	0.526		mg/L		105	80 - 120
Selenium	1.00	1.03		mg/L		103	80 - 120
Thallium	1.00	1.07		mg/L		107	80 - 120

Lab Sample ID: 180-129641-3 MS Client Sample ID: CCR-AP-7 **Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 379151

•	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	ND		0.250	0.251		mg/L		100	75 - 125
Arsenic	0.0055		1.00	1.00		mg/L		100	75 - 125
Barium	0.12		1.00	1.16		mg/L		104	75 - 125
Beryllium	ND		0.500	0.519		mg/L		104	75 - 125
Boron	0.13		1.25	1.23		mg/L		88	75 - 125
Cadmium	ND		0.500	0.501		mg/L		100	75 - 125
Calcium	110		25.0	142	4	mg/L		135	75 - 125
Chromium	ND		0.500	0.502		mg/L		100	75 - 125
Cobalt	0.00054		0.500	0.499		mg/L		100	75 - 125
Lead	0.00013	J	0.500	0.507		mg/L		101	75 - 125
Lithium	0.0096		0.500	0.501		mg/L		98	75 - 125
Molybdenum	0.0015	J	0.500	0.517		mg/L		103	75 - 125
Selenium	ND		1.00	0.984		mg/L		98	75 - 125
Thallium	ND		1.00	1.07		mg/L		107	75 - 125

Lab Sample ID: 180-129641-3 MSD Client Sample ID: CCR-AP-7 **Matrix: Water Prep Type: Total Recoverable Analysis Batch: 379151 Prep Batch: 378725** Sample Sample Spike MSD MSD %Rec. **RPD** Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Antimony ND 0.250 0.248 mg/L 99

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Prep Batch: 378725

75 - 125

12/14/2021

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

Lab Sample ID: 180-129641-3 MSD

Matrix: Water

Analysis Batch: 379151

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

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 378157

Prep Type: Total/NA

Prep Batch: 378157

Prep Type: Total/NA

Client Sample ID: CCR-AP-7

Client Sample ID: CCR-AP-7

Prep Batch: 378725

Alialysis Datcil. 3/3/3/									Lieh De	itteri. J	0123
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.0055		1.00	1.01		mg/L		100	75 - 125	1	20
Barium	0.12		1.00	1.14		mg/L		102	75 - 125	1	20
Beryllium	ND		0.500	0.513		mg/L		103	75 - 125	1	20
Boron	0.13		1.25	1.24		mg/L		89	75 - 125	1	20
Cadmium	ND		0.500	0.498		mg/L		100	75 - 125	1	20
Calcium	110		25.0	139	4	mg/L		124	75 - 125	2	20
Chromium	ND		0.500	0.506		mg/L		101	75 - 125	1	20
Cobalt	0.00054		0.500	0.507		mg/L		101	75 - 125	2	20
Lead	0.00013	J	0.500	0.504		mg/L		101	75 - 125	1	20
Lithium	0.0096		0.500	0.493		mg/L		97	75 - 125	2	20
Molybdenum	0.0015	J	0.500	0.521		mg/L		104	75 - 125	1	20
Selenium	ND		1.00	0.982		mg/L		98	75 - 125	0	20
Thallium	ND		1.00	1.06		mg/L		106	75 - 125	1	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-378157/1-A

Matrix: Water

Analysis Batch: 378424

MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		11/09/21 06:16	11/10/21 10:43	1

Lab Sample ID: LCS 180-378157/2-A

Matrix: Water

Analysis Batch: 378424

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits 0.00250 80 - 120 Mercury 0.00246 mg/L

Lab Sample ID: 180-129641-3 MS

Matrix: Water

Analysis Batch: 378424 **Prep Batch: 378157** MS MS Sample Sample Spike %Rec. Analyte **Result Qualifier** Added Result Qualifier Unit %Rec Limits Mercury ND 0.00100 0.000948 mg/L 95 75 - 125

Lab Sample ID: 180-129641-3 MSD

Matrix: Water									Prep Ty	pe: Tot	al/NA
Analysis Batch: 378424									Prep Ba	atch: 37	78157
_	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.00100	0.000955		mg/L		96	75 - 125	1	20

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Spike

Added

7.00

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring Culley West

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-378228/1

Analysis Batch: 378228

Matrix: Water

Analyte

рН

Lab Sample ID: 180-129641-3 DU

Matrix: Water

Matrix: Water

Analysis Batch: 378228

Sample Sample Analyte

Lab Sample ID: MB 180-378299/2

рΗ

Result Qualifier 7.4 HF

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

RL

10

RL

10

Spike

Added

Spike

Added

422

422

Result Qualifier 7.4 HF

DU DU

LCS LCS

7.0

Result Qualifier

MDL Unit

LCS LCS

442

Result Qualifier

MDL Unit

10 mg/L

LCS LCS

DU DU

392

Result Qualifier

10 mg/L

SU

Unit

Unit

mg/L

Unit

mg/L

Unit

SU

Client Sample ID: Method Blank

Analyzed

11/09/21 16:49

Client Sample ID: Lab Control Sample

%Rec.

Limits

80 - 120

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

%Rec.

Limits

80 - 120

Client Sample ID: CCR-AP-7

Analyzed

11/16/21 12:49

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Job ID: 180-129641-1

Prep Type: Total/NA

Prep Type: Total/NA

RPD

0.3

RPD

Limit

Dil Fac

Dil Fac

10

Client Sample ID: Lab Control Sample

%Rec

100

D

D

Prepared

%Rec

Prepared

%Rec

93

105

%Rec.

Limits

99 - 101

Client Sample ID: CCR-AP-7

Analysis Batch: 378299

MB MB

MB MB

ND

Result Qualifier

Result Qualifier Analyte Total Dissolved Solids ND

Lab Sample ID: LCS 180-378299/1 **Matrix: Water**

Analysis Batch: 378299

Analyte Total Dissolved Solids

Lab Sample ID: MB 180-379135/2

Matrix: Water

Analysis Batch: 379135

Total Dissolved Solids

Analyte

Lab Sample ID: LCS 180-379135/1

Matrix: Water Analysis Batch: 379135

Analyte

Total Dissolved Solids

Matrix: Water

Analysis Batch: 379135

Lab Sample ID: 180-129641-3 DU

Total Dissolved Solids

Sample Sample

Result Qualifier 530

Result Qualifier 530 H

Unit mg/L

D

RPD RPD Limit 8.0

Eurofins TestAmerica, Pittsburgh

Project/Site: CCR Groundwater Monitoring Culley West

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-536422/23-A

Matrix: Water

Analysis Batch: 540406

Client Sample ID: Method Blank

Prep Type: Total/NA

Job ID: 180-129641-1

Prep Batch: 536422

MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-226 0.1415 U 0.117 0.118 1.00 0.176 pCi/L 11/12/21 13:18 12/06/21 18:56

Total

Count

LCS LCS

Result Qual

12.19

MB

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 98.5 40 - 110 11/12/21 13:18 12/06/21 18:56

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 536422

Analysis Batch: 540390 Total

Spike

Added

15.1

%Rec. Uncert.

 $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits 1.33 1.00 0.207 pCi/L 81 75 - 125

LCS LCS

Lab Sample ID: LCS 160-536422/1-A

Carrier %Yield Qualifier Limits Ba Carrier 98.7 40 - 110

Lab Sample ID: 180-129641-3 DU

Matrix: Water

Matrix: Water

Analyte

Radium-226

Analysis Batch: 540406

Client Sample ID: CCR-AP-7

Prep Type: Total/NA Prep Batch: 536422

Total

Sample Sample DU DU **RER** Uncert. Analyte Result Qual $(2\sigma + / -)$ RL **MDC** Unit Result Qual RER Limit 0.354 Radium-226 0.186 1.00 0.217 pCi/L 0.23 0.4335

DU DU

Carrier %Yield Qualifier Limits Ba Carrier 89.1 40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-536427/23-A

Matrix: Water

Analysis Batch: 539785

Client Sample ID: Method Blank

Prep Batch: 536427

Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Dil Fac Analyzed Radium-228 0.374 0.378 1.00 0.562 pCi/L 11/12/21 14:30 12/01/21 14:32 0.6272

MB MB

Carrier %Yield Qualifier Limits Prepared Dil Fac Analyzed Ba Carrier 98.5 40 - 110 11/12/21 14:30 12/01/21 14:32 40 - 110 Y Carrier 87.1 11/12/21 14:30 12/01/21 14:32

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10

Prep Type: Total/NA

QC Sample Results

Client: Haley & Aldrich, Inc.

Job ID: 180-129641-1

Project/Site: CCR Groundwater Monitoring Culley West

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

Lab Sample ID: LCS 160-536427/1-A Client Sample ID: Lab Control Sample

Matrix: Water Prep Type: Total/NA Analysis Batch: 539996 Prep Batch: 536427

				Total					
	Spike	LCS	LCS	Uncert.				%Rec.	
Analyte	Added	Result	Qual	(2σ+/-)	RL	MDC Unit	%Rec	Limits	
Radium-228	12.1	9.551		1.25	1.00	0.653 pCi/L	79	75 - 125	

 Carrier
 %Yield
 Qualifier
 Limits

 Ba Carrier
 98.7
 40 - 110

 Y Carrier
 85.6
 40 - 110

Lab Sample ID: 180-129641-3 DU Client Sample ID: CCR-AP-7

Matrix: Water Prep Type: Total/NA Analysis Batch: 539783 Prep Batch: 536427

					iotai				
	Sample	Sample	DU	DU	Uncert.				RER
Analyte	Result	Qual	Result	Qual	(2σ+/-)	RL	MDC Unit	RER	Limit
Radium-228	0.313	U	-0.3537	U	0.385	1.00	0.745 pCi/L	 0.84	1

 Carrier
 %Yield Ba Carrier
 Qualifier 40 - 110
 Limits 40 - 110

 Y Carrier
 86.0
 40 - 110

LCS LCS

3

4

6

9

10

12

QC Association Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring Culley West

HPLC/IC

Analysis Batch: 378057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129641-1	WAP-1	Total/NA	Water	EPA 9056A	
180-129641-1	WAP-1	Total/NA	Water	EPA 9056A	
180-129641-2	WAP-2R	Total/NA	Water	EPA 9056A	
180-129641-2	WAP-2R	Total/NA	Water	EPA 9056A	
180-129641-3	CCR-AP-7	Total/NA	Water	EPA 9056A	
MB 180-378057/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-378057/6	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-129641-3 MS	CCR-AP-7	Total/NA	Water	EPA 9056A	
180-129641-3 MSD	CCR-AP-7	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 378157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129641-1	WAP-1	Total/NA	Water	7470A	
180-129641-2	WAP-2R	Total/NA	Water	7470A	
180-129641-3	CCR-AP-7	Total/NA	Water	7470A	
MB 180-378157/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-378157/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-129641-3 MS	CCR-AP-7	Total/NA	Water	7470A	
180-129641-3 MSD	CCR-AP-7	Total/NA	Water	7470A	

Analysis Batch: 378424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129641-1	WAP-1	Total/NA	Water	EPA 7470A	378157
180-129641-2	WAP-2R	Total/NA	Water	EPA 7470A	378157
180-129641-3	CCR-AP-7	Total/NA	Water	EPA 7470A	378157
MB 180-378157/1-A	Method Blank	Total/NA	Water	EPA 7470A	378157
LCS 180-378157/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	378157
180-129641-3 MS	CCR-AP-7	Total/NA	Water	EPA 7470A	378157
180-129641-3 MSD	CCR-AP-7	Total/NA	Water	EPA 7470A	378157

Prep Batch: 378725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129641-1	WAP-1	Total Recoverable	Water	3005A	
180-129641-2	WAP-2R	Total Recoverable	Water	3005A	
180-129641-3	CCR-AP-7	Total Recoverable	Water	3005A	
MB 180-378725/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-378725/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-129641-3 MS	CCR-AP-7	Total Recoverable	Water	3005A	
180-129641-3 MSD	CCR-AP-7	Total Recoverable	Water	3005A	

Analysis Batch: 379151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129641-1	WAP-1	Total Recoverable	Water	EPA 6020A	378725
180-129641-2	WAP-2R	Total Recoverable	Water	EPA 6020A	378725
180-129641-3	CCR-AP-7	Total Recoverable	Water	EPA 6020A	378725
MB 180-378725/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	378725
LCS 180-378725/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	378725
180-129641-3 MS	CCR-AP-7	Total Recoverable	Water	EPA 6020A	378725
180-129641-3 MSD	CCR-AP-7	Total Recoverable	Water	EPA 6020A	378725

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Job ID: 180-129641-1

QC Association Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR Groundwater Monitoring Culley West

General Chemistry

Analysis Batch: 378228

Lab Sample ID 180-129641-1	Client Sample ID WAP-1	Prep Type Total/NA	Matrix Water	Method EPA 9040C	Prep Batch
180-129641-2	WAP-2R	Total/NA	Water	EPA 9040C	
180-129641-3	CCR-AP-7	Total/NA	Water	EPA 9040C	
LCS 180-378228/1	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-129641-3 DU	CCR-AP-7	Total/NA	Water	EPA 9040C	

Analysis Batch: 378299

Lab Sample ID 180-129641-1	Client Sample ID WAP-1	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
180-129641-2	WAP-2R	Total/NA	Water	SM 2540C	
180-129641-3	CCR-AP-7	Total/NA	Water	SM 2540C	
MB 180-378299/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-378299/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 379135

Lab Sample ID MB 180-379135/2	Client Sample ID Method Blank	Prep Type Total/NA	Matrix Water	Method SM 2540C	Prep Batch
LCS 180-379135/1 180-129641-3 DU	Lab Control Sample CCR-AP-7	Total/NA Total/NA	Water Water	SM 2540C SM 2540C	
180-129041-3 DU	CCR-AF-1	IOIai/NA	vvalei	SIVI 2540C	

Rad

Prep Batch: 536422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129641-1	WAP-1	Total/NA	Water	PrecSep-21	
180-129641-2	WAP-2R	Total/NA	Water	PrecSep-21	
180-129641-3	CCR-AP-7	Total/NA	Water	PrecSep-21	
MB 160-536422/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-536422/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-129641-3 DU	CCR-AP-7	Total/NA	Water	PrecSep-21	

Prep Batch: 536427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-129641-1	WAP-1	Total/NA	Water	PrecSep_0	<u> </u>
180-129641-2	WAP-2R	Total/NA	Water	PrecSep_0	
180-129641-3	CCR-AP-7	Total/NA	Water	PrecSep_0	
MB 160-536427/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-536427/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-129641-3 DU	CCR-AP-7	Total/NA	Water	PrecSep_0	

Eurofins TestAmerica, Pittsburgh

12/14/2021

Job ID: 180-129641-1

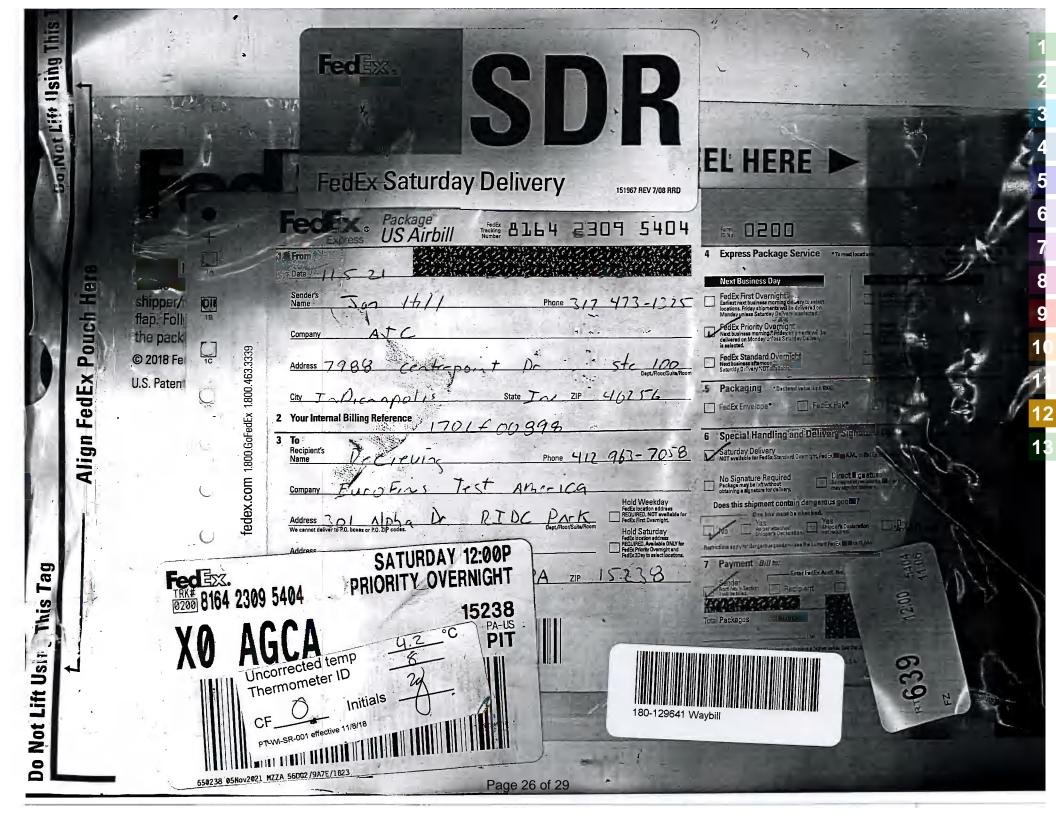
Chain of Custody Record

546476

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Environment Testing TestAmerica

	Regul	atory Pro	gram: [] bw [NPDES	s 🗆	RCRA		Other:							TAL-8210
Client Contact	Project Ma	anager: M	back Br	eitre		Site C	Conta	act: `	Jon	1/11/		e: <i>9</i>				COC No:
Company Name: A+C	Tel/Email:	317-	849-	4998	•	Lab C	Conta	act:	Sen	HAVES	Car	rier: /	Fed	EX		of COCs
Address: 7988 centerpoint Dr ste 100		Analysis T	urnaround	Time			4056A ORGAN 28		288							Sampler:
City/State/Zip: Inlian poly In 46256 Phone: 317-473-1325	_ CALEN	DAR DAYS	☐ woi	RKING DAY	'S		1	12	72							For Lab Use Only:
Phone: 317-473-1325		T if different from	om Below			Z	। द्व	1	3							Walk-in Client:
Fax:			weeks			(N) (X/N)	9	2 -	930					4-1-1		Lab Sampling:
Project Name: Cully west Site: 12cher			week				3	2	- II							
PO# 170 Lt 00 898			days			nple (Y	2	77	ध्य							Job / SDG No.:
170 CF 00 898		1	day Sample	-		MS/		1	Paper C							
			Туре			Filtered San Perform MS	20406	60204	1, 2							
Commis Identification	Sample Date	Sample	(C=Comp,		# of	Filtered	2	8	3315							
Sample Identification	Date	Time	G=Grab)	Matrix	-	E 6	6	9	7 0		-	_		-	-	Sample Specific Notes:
WAP-1	11-4-21	900	6	W	4		1				-					
WAP-ZR	1	1050			5											
CCR- AP-7		1200			5						-					
ms-2 msD-2		1200			5											CLP-19-7
msD-2	\/	1200	V	1	5		V	V								L V V
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							H	\top	+	100	<u> </u>	liter reporter	l Harri Han	++-		
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						Ш				190	11000					
	P									180	7-1296	41 Chai	in of Cu	stody		
				F												
Preservation Used: 1= Ice, 2= HCI; 3= H2SO4; 4=HNO3;	5=NaOH; 6	S= Other _														
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please	e List any E	PA Waste	Codes for	the same	ole in th		mple	Disp	oosal (A fee may b	e ass	essed i	f samp	les are i	retained	d longer than 1 month)
Comments Section if the lab is to dispose of the sample.											/					
Non-Hazard Flammable Skin Irritant	Poison	В	Unkno	own			Re	eturn to	o Client		Disposa	by Lab		Arch	ive for	Months
Special Instructions/QC Requirements & Comments:			111													
Custody Seals Intact: Yes No	Custody S									emp. (°C): O	bs'd:_		_ Corr		=	Therm ID No.:
Relinquished by:	Company:	Ato		Date/Til	me: /9/	Re	ceive	d by:	the	lord	`	Cor	npany:	Pitt		Date/Time:
Relinquished by:	Company:			Date/Ti	me.	Re	ceive	ed by:		0			npany:			Date/Time:
Relinquished by:	Company:		7.	Date/Ti	me:	Re	ceive	ed in l	Labora	tory by:		Cor	npany:			Date/Time:



Job Number: 180-129641-1

Login Number: 129641

List Source: Eurofins TestAmerica, Pittsburgh

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	

Job Number: 180-129641-1

Login Number: 129641

List Number: 2

Creator: Korrinhizer, Micha L

List Source: Eurofins TestAmerica, St. Louis

List Creation: 11/10/21 12:16 AM

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey</td <td>True</td> <td>Comment</td>	True	Comment
meter.		
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	

Job Number: 180-129641-1

Login Number: 129641

List Number: 3

Creator: Johnson, Autumn R

List Source: Eurofins TestAmerica, St. Louis

List Creation: 11/12/21 12:27 PM

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td>Johnnent</td>	True	Johnnent
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	



Environment Testing America

ANALYTICAL REPORT

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-137587-1

Client Project/Site: CCR GW Monitoring FB Culley West

Revision: 1

For:

Haley & Aldrich, Inc. 465 Medford St Suite 2200 Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Kuntl Hay

Authorized for release by: 6/8/2022 1:57:59 PM

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@et.eurofinsus.com

..... LINKS

Review your project results through

Have a Question?



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Job ID: 180-137587-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative 180-137587-1

Revised Report: Revised to incorporate Radiological analysis. This report replaces the one generated on 05/25/22 @ 14:09

Comments

No additional comments.

Receipt

The samples were received on 5/4/2022 11:15 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 1.9° C and 2.2° C.

GC Semi VOA

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

RAD

Method 9315: Radium-226 batch 564511

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-4S (180-137587-1), WAP-4I (180-137587-2), WAP-4D (180-137587-3), WAP-5S (180-137587-4), WAP-5I (180-137587-5), WAP-5I (180-137587-5[MS]), WAP-5I (180-137587-5[MSD]), WAP-5D (180-137587-6), WAP-6S (180-137587-7), WAP-6I (180-137587-8), WAP-6D (180-137587-9), CCR-AP-7 (180-137587-10), CCR-AP-7 (180-137587-10[MSD]), DUP-1 (180-137587-11), DUP-2 (180-137587-12), FIELD BLANK (180-137587-13), (LCS 160-564511/1-A) and (MB 160-564511/24-A)

Method 9320: Radium-228 batch 564514

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-4S (180-137587-1), WAP-4I (180-137587-2), WAP-4D (180-137587-3), WAP-5S (180-137587-4), WAP-5I (180-137587-5), WAP-5I (180-137587-5[MS]), WAP-5I (180-137587-5[MSD]), WAP-5D (180-137587-6), WAP-6S (180-137587-7), WAP-6I (180-137587-8), WAP-6D (180-137587-9), CCR-AP-7 (180-137587-10), CCR-AP-7 (180-137587-10[MSD]), DUP-1 (180-137587-11), DUP-2 (180-137587-12), FIELD BLANK (180-137587-13), (LCS 160-564514/1-A) and (MB 160-564514/24-A)

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

Metals

Method 6020A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 180-398676 and analytical batch 180-399007 were outside control limits for manganese. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Methods 6020A, 6020B: The ICB recovered above the MDL for nickel but less than the RL; therefore the data has been reported. (ICB 180-399007/6)

Method 6020A: The following sample was diluted to bring the concentration of target analytes within the calibration range: WAP-4S (180-137587-1). Elevated reporting limits (RLs) are provided.

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

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Job ID: 180-137587-1

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-137587-1

Project/Site: CCR GW Monitoring FB Culley West

Qualifiers

HPLC/IC

Qualifier **Qualifier Description**

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

Metals

Qualifier **Qualifier Description**

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)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	05-29-22
California	State	2891	04-30-22 *
Connecticut	State	PH-0688	05-29-22
Florida	NELAP	E871008	05-29-22
Georgia	State	PA 02-00416	05-29-22
Illinois	NELAP	004375	05-29-22
Kansas	NELAP	E-10350	05-29-22
Kentucky (UST)	State	162013	04-30-22 *
Kentucky (WW)	State	KY98043	05-29-22
Louisiana	NELAP	04041	05-29-22
Maine	State	PA00164	03-06-24
Minnesota	NELAP	042-999-482	05-29-22
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	05-29-22
New Jersey	NELAP	PA005	05-29-22
New York	NELAP	11182	05-29-22
North Carolina (WW/SW)	State	434	05-29-22
North Dakota	State	R-227	04-30-22 *
Oregon	NELAP	PA-2151	02-07-23
Pennsylvania	NELAP	02-00416	05-29-22
Rhode Island	State	LAO00362	12-31-21 *
South Carolina	State	89014	05-29-22
Texas	NELAP	T104704528	05-29-22
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-22
Virginia	NELAP	10043	05-25-22
West Virginia DEP	State	142	05-29-22
Wisconsin	State	998027800	08-31-22

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 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	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	07-01-22
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22

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

Eurofins Pittsburgh

Job ID: 180-137587-1

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Laboratory: Eurofins St. Louis (Continued)

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

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

Job ID: 180-137587-1

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Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-137587-1	WAP-4S	Water	05/03/22 11:45	05/04/22 13:40
180-137587-2	WAP-4I	Water	05/03/22 12:30	05/04/22 13:40
180-137587-3	WAP-4D	Water	05/03/22 13:20	05/04/22 13:40
180-137587-4	WAP-5S	Water	05/03/22 08:25	05/04/22 13:40
180-137587-5	WAP-5I	Water	05/03/22 09:20	05/04/22 13:40
180-137587-6	WAP-5D	Water	05/03/22 10:23	05/04/22 13:40
180-137587-7	WAP-6S	Water	05/03/22 13:50	05/04/22 13:40
180-137587-8	WAP-6I	Water	05/03/22 13:00	05/04/22 13:40
180-137587-9	WAP-6D	Water	05/03/22 15:00	05/04/22 13:40
180-137587-10	CCR-AP-7	Water	05/03/22 09:20	05/04/22 13:40
180-137587-11	DUP-1	Water	05/03/22 00:00	05/04/22 13:40
180-137587-12	DUP-2	Water	05/03/22 00:00	05/04/22 13:40
180-137587-13	FIELD BLANK	Water	05/03/22 10:10	05/04/22 13:40

Job ID: 180-137587-1

Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
EPA 9040C	рН	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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.

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

Laboratory References:

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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

Job ID: 180-137587-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137587-1

Matrix: Water

Job ID: 180-137587-1

Date Collected: 05/03/22 11:45 Date Received: 05/04/22 13:40

Client Sample ID: WAP-4S

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		1			399469	05/20/22 21:59	LWM	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A nt ID: A		1	25 mL	25 mL	398676 399007	05/13/22 10:12 05/14/22 18:07		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A nt ID: A		10	25 mL	25 mL	398676 399192	05/13/22 10:12 05/17/22 12:30		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	7470A EPA 7470A nt ID: HGY		1	50 mL	50 mL	399000 399123	05/17/22 04:57 05/17/22 15:03		TAL PIT TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: PHTITRATOR		1			397958	05/06/22 10:35	HEK	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep-21 9315 nt ID: GFPCBLUE		1	1004.87 mL	1.0 g	564511 569008	05/09/22 09:56 06/07/22 16:04		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep_0 9320 nt ID: GFPCPURPLE		1	1004.87 mL	1.0 g	564514 568835	05/09/22 10:57 06/07/22 11:56		TAL SL TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: WAP-4I Lab Sample ID: 180-137587-2 Date Collected: 05/03/22 12:30

Date Received: 05/04/22 13:40

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			399469	05/20/22 23:28	LWM	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: A		1	25 mL	25 mL	398676 399007	05/13/22 10:12 05/14/22 18:21		TAL PIT TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: A		1	25 mL	25 mL	398676 399192	05/13/22 10:12 05/17/22 12:34		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGY		1	50 mL	50 mL	399000 399123	05/17/22 04:57 05/17/22 15:04		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			397958	05/06/22 10:40	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT

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Matrix: Water

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-41

Date Collected: 05/03/22 12:30

Lab Sample ID: 180-137587-2

Matrix: Water

Date Received: 05/04/22 13:40

	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			752.28 mL	1.0 g	564511	05/09/22 09:56	MS	TAL SL
Total/NA	Analysis Instrumer	9315 nt ID: GFPCBLUE		1			569008	06/07/22 16:04	FLC	TAL SL
Total/NA	Prep	PrecSep_0			752.28 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis Instrumer	9320 nt ID: GFPCPURPLE		1			568835	06/07/22 11:56	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 nt ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: WAP-4D Lab Sample ID: 180-137587-3

Date Collected: 05/03/22 13:20 Matrix: Water

Date Received: 05/04/22 13:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis Instrument	EPA 9056A ID: CHIC2100A		2.5			399469	05/20/22 22:28	LWM	TAL PIT
Total Recoverable	Prep	3005A			25 mL	25 mL	398676	05/13/22 10:12	KWP	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020A :ID: A		1			399007	05/14/22 18:25	RSK	TAL PIT
Total Recoverable	Prep	3005A			25 mL	25 mL	398676	05/13/22 10:12	KWP	TAL PIT
Total Recoverable	Analysis Instrument	EPA 6020A :ID: A		1			399192	05/17/22 12:56	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	399000	05/17/22 04:57	RJR	TAL PIT
Total/NA	Analysis Instrument	EPA 7470A ID: HGY		1			399123	05/17/22 15:05	RJR	TAL PIT
Total/NA	Analysis Instrument	EPA 9040C ID: PHTITRATOR		1			397958	05/06/22 10:46	HEK	TAL PIT
Total/NA	Analysis Instrument	SM 2540C ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
Total/NA	Prep	PrecSep-21			1003.79 mL	1.0 g	564511	05/09/22 09:56	MS	TAL SL
Total/NA	Analysis Instrument	9315 ID: GFPCBLUE		1			569008	06/07/22 16:04	FLC	TAL SL
Total/NA	Prep	PrecSep_0			1003.79 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis Instrument	9320 ID: GFPCPURPLE		1			568835	06/07/22 11:56	FLC	TAL SL
Total/NA	Analysis Instrument	Ra226_Ra228		1			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: WAP-5S

Date Collected: 05/03/22 08:25

Date Received: 05/04/22 13:40

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			399469	05/21/22 00:57	LWM	TAL PIT
	Instrumer	nt ID: CHIC2100A								

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Lab Sample ID: 180-137587-4

Matrix: Water

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137587-4

Matrix: Water

Job ID: 180-137587-1

Date Collected: 05/03/22 08:25 Date Received: 05/04/22 13:40

Client Sample ID: WAP-5S

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			25 mL	25 mL	398676	05/13/22 10:12		TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			399007	05/14/22 18:29	RSK	TAL PIT
Total Recoverable	Prep	3005A			25 mL	25 mL	398676	05/13/22 10:12	KWP	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			399192	05/17/22 12:59	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	399000	05/17/22 04:57	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			399123	05/17/22 15:06	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			397958	05/06/22 10:52	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
Total/NA	Prep	PrecSep-21			992.69 mL	1.0 g	564511	05/09/22 09:56	MS	TAL SL
Total/NA	Analysis Instrumen	9315 ID: GFPCBLUE		1		_	569008	06/07/22 16:04	FLC	TAL SL
Total/NA	Prep	PrecSep_0			992.69 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis Instrumen	9320 ID: GFPCPURPLE		1			568835	06/07/22 11:57	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: WAP-5I Lab Sample ID: 180-137587-5 Date Collected: 05/03/22 09:20

Matrix: Water Date Received: 05/04/22 13:40

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: CHICS2100B		1			399666			TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A It ID: A		1	25 mL	25 mL	398676 399007	05/13/22 10:12 05/14/22 18:50		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A it ID: A		1	25 mL	25 mL	398676 399192	05/13/22 10:12 05/17/22 13:14		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A tt ID: HGY		1	50 mL	50 mL	399000 399123	05/17/22 04:57 05/17/22 15:07		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			397958	05/06/22 10:13	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 it ID: GFPCBLUE		1	992.34 mL	1.0 g	564511 569008	05/09/22 09:56 06/07/22 16:04		TAL SL TAL SL

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137587-5

Matrix: Water

Job ID: 180-137587-1

Date Collected: 05/03/22 09:20 Date Received: 05/04/22 13:40

Client Sample ID: WAP-5I

	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			992.34 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCPURPLE	Ē	1			568835	06/07/22 11:57	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: WAP-5D Lab Sample ID: 180-137587-6

Date Collected: 05/03/22 10:23 Matrix: Water

Date Received: 05/04/22 13:40

	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: CHIC2100A		1			399469	05/21/22 01:40	LWM	TAL PI
Total Recoverable	Prep	3005A			25 mL	25 mL	398676	05/13/22 10:12	KWP	TAL PI
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			399007	05/14/22 19:08	RSK	TAL PI
Total Recoverable	Prep	3005A			25 mL	25 mL	398676	05/13/22 10:12	KWP	TAL PI
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			399192	05/17/22 13:32	RSK	TAL PI
Total/NA	Prep	7470A			50 mL	50 mL	399000	05/17/22 04:57	RJR	TAL PI
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			399123	05/17/22 15:10	RJR	TAL PI
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			397958	05/06/22 10:57	HEK	TAL PI
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PI
Total/NA	Prep	PrecSep-21			993.84 mL	1.0 g	564511	05/09/22 09:56	MS	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCBLUE		1			569008	06/07/22 16:05	FLC	TAL SL
Total/NA	Prep	PrecSep_0			993.84 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCPURPLE	i.	1			568835	06/07/22 11:59	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: WAP-6S Lab Sample ID: 180-137587-7

Date Collected: 05/03/22 13:50 Date Received: 05/04/22 13:40

	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			399469	05/21/22 02:36	LWM	TAL PIT
	Instrumer	t ID: CHIC2100A								
Total Recoverable	Prep	3005A			25 mL	25 mL	398676	05/13/22 10:12	KWP	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			399007	05/14/22 19:12	RSK	TAL PIT
	Instrumer	nt ID: A								

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Matrix: Water

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-6S Lab Sample ID: 180-137587-7

Date Collected: 05/03/22 13:50 **Matrix: Water**

Date Received: 05/04/22 13:40

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			25 mL	25 mL	398676	05/13/22 10:12	KWP	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: A		1			399192	05/17/22 13:43	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	399000	05/17/22 04:57	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			399123	05/17/22 15:14	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			397958	05/06/22 11:03	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
Total/NA	Prep	PrecSep-21			993.50 mL	1.0 g	564511	05/09/22 09:56	MS	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCBLUE		1			569008	06/07/22 16:05	FLC	TAL SL
Total/NA	Prep	PrecSep_0			993.50 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCPURPLE	į.	1			568835	06/07/22 11:58	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: WAP-6I Lab Sample ID: 180-137587-8

Date Collected: 05/03/22 13:00 **Matrix: Water** Date Received: 05/04/22 13:40

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			399469	05/21/22 03:03	LWM	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A nt ID: A		1	25 mL	25 mL	398676 399007	05/13/22 10:12 05/14/22 19:27		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A at ID: A		1	25 mL	25 mL	398676 399192	05/13/22 10:12 05/17/22 13:58		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A nt ID: HGY		1	50 mL	50 mL	398860 398978	05/16/22 07:49 05/16/22 14:40		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			397958	05/06/22 11:22	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 at ID: GFPCBLUE		1	992.16 mL	1.0 g	564511 569008	05/09/22 09:56 06/07/22 16:05		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 at ID: GFPCPURPLE		1	992.16 mL	1.0 g	564514 568835	05/09/22 10:57 06/07/22 11:58		TAL SL TAL SL

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Job ID: 180-137587-1

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-6I Lab Sample ID: 180-137587-8

Matrix: Water

Date Collected: 05/03/22 13:00 Date Received: 05/04/22 13:40

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Job ID: 180-137587-1

	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			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: WAP-6D

Date Collected: 05/03/22 15:00

Lab Sample ID: 180-137587-9

Matrix: Water

Date Received: 05/04/22 13:40

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			399469	05/21/22 05:09	LWM	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A at ID: A		1	25 mL	25 mL	398676 399007	05/13/22 10:12 05/14/22 19:30		TAL PIT TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A at ID: A		1	25 mL	25 mL	398676 399192	05/13/22 10:12 05/17/22 14:01		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A nt ID: HGY		1	50 mL	50 mL	398860 398978	05/16/22 07:49 05/16/22 14:41		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			397958	05/06/22 11:28	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 at ID: GFPCBLUE		1	992.40 mL	1.0 g	564511 569008	05/09/22 09:56 06/07/22 16:05		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 at ID: GFPCPURPLE		1	992.40 mL	1.0 g	564514 568835	05/09/22 10:57 06/07/22 11:59		TAL SL TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: CCR-AP-7

Date Collected: 05/03/22 09:20

Lab Sample ID: 180-137587-10

Matrix: Water

Date Received: 05/04/22 13:40

	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: CHICS2100B		1			399666	05/24/22 01:37	M1D	TAL PIT
Total Recoverable	Prep	3005A			25 mL	25 mL	398537	05/12/22 09:54	KWP	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A nt ID: A		1			399007	05/14/22 15:56	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	398860	05/16/22 07:49	RJR	TAL PIT
Total/NA	Analysis Instrumer	EPA 7470A nt ID: HGY		1			398978	05/16/22 14:42	RJR	TAL PIT

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137587-10 **Client Sample ID: CCR-AP-7**

Date Collected: 05/03/22 09:20 Date Received: 05/04/22 13:40

Matrix: Water

Job ID: 180-137587-1

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9040C		1			397958	05/06/22 11:11	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
Total/NA	Prep	PrecSep-21			994.05 mL	1.0 g	564511	05/09/22 09:56	MS	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCBLUE		1			569008	06/07/22 16:05	FLC	TAL SL
Total/NA	Prep	PrecSep_0			994.05 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCPURPLE		1			568835	06/07/22 11:59	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Lab Sample ID: 180-137587-11 **Client Sample ID: DUP-1**

Date Collected: 05/03/22 00:00 **Matrix: Water**

Date Received: 05/04/22 13:40

Prep Type	Batch	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Type Analysis Instrumen	EPA 9056A at ID: CHIC2100A	Kuii	1	Amount	Amount	399469	05/21/22 03:45		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A tt ID: A		1	25 mL	25 mL	398537 399007	05/12/22 09:54 05/14/22 16:21		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A it ID: HGY		1	50 mL	50 mL	398860 398978	05/16/22 07:49 05/16/22 14:45		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			397958	05/06/22 11:33	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 It ID: GFPCRED		1	996.29 mL	1.0 g	564511 568823	05/09/22 09:56 06/07/22 18:12		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 tt ID: GFPCPURPLE		1	996.29 mL	1.0 g	564514 568835	05/09/22 10:57 06/07/22 12:01		TAL SL TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Lab Sample ID: 180-137587-12 **Client Sample ID: DUP-2**

Date Collected: 05/03/22 00:00 Date Received: 05/04/22 13:40

Prep Type Total/NA	Batch Type Analysis	Batch Method EPA 9056A	Run	Dil Factor	Initial Amount	Final Amount	Batch Number 399469	Prepared or Analyzed 05/21/22 04:13	Analyst LWM	Lab TAL PIT
	Instrumen	t ID: CHIC2100A								

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Matrix: Water

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137587-12

Lab Sample ID: 180-137587-13

Matrix: Water

Matrix: Water

Job ID: 180-137587-1

Client Sample ID: DUP-2 Date Collected: 05/03/22 00:00 Date Received: 05/04/22 13:40

	Batch	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			25 mL	25 mL	398537	05/12/22 09:54	KWP	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: A		1			399007	05/14/22 16:36	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	398860	05/16/22 07:49	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			398978	05/16/22 14:49	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			397958	05/06/22 11:39	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
Total/NA	Prep	PrecSep-21			999.76 mL	1.0 g	564511	05/09/22 09:56	MS	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			568823	06/07/22 18:12	FLC	TAL SL
Total/NA	Prep	PrecSep_0			999.76 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCORANGE	≣	1			568850	06/07/22 12:03	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: FIELD BLANK

Date Collected: 05/03/22 10:10 Date Received: 05/04/22 13:40

	Batch	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			399469	05/21/22 04:27	LWM	TAL PIT
	Instrumen	t ID: CHIC2100A								
Total Recoverable	Prep	3005A			25 mL	25 mL	398537	05/12/22 09:54	KWP	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			399007	05/14/22 16:39	RSK	TAL PIT
	Instrumen	t ID: A								
Total/NA	Prep	7470A			50 mL	50 mL	398860	05/16/22 07:49	RJR	TAL PIT
Total/NA	Analysis	EPA 7470A		1			398978	05/16/22 14:50	RJR	TAL PIT
	Instrumen	t ID: HGY								
Total/NA	Analysis	EPA 9040C		1			398030	05/07/22 16:31	HEK	TAL PIT
	Instrumen	t ID: NOEQUIP								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	397818	05/05/22 17:26	JCR	TAL PIT
	Instrumen	t ID: NOEQUIP								
Total/NA	Prep	PrecSep-21			1002.44 mL	1.0 g	564511	05/09/22 09:56	MS	TAL SL
Total/NA	Analysis	9315		1			568823	06/07/22 18:12	FLC	TAL SL
	Instrumen	t ID: GFPCRED								
Total/NA	Prep	PrecSep 0			1002.44 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis	9320		1		•	568850	06/07/22 12:03	FLC	TAL SL
	Instrumen	t ID: GFPCORANGE	Ξ							
Total/NA	Analysis	Ra226 Ra228		1			569036	06/08/22 12:54	SCB	TAL SL
	Instrumen	t ID: NOEQUIP								

Eurofins Pittsburgh

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Laboratory References:

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058 TAL SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL PIT

Batch Type: Prep

KWP = Kenneth Peters

RJR = Ron Rosenbaum

Batch Type: Analysis

HEK = Hope Kiesling

JCR = Jessica Rodgers

LWM = Larry Matko

M1D = Maureen Donlin

RJR = Ron Rosenbaum

RSK = Robert Kurtz

Lab: TAL SL

Batch Type: Prep

MS = Matthew Swaringam

Batch Type: Analysis

FLC = Fernando Cruz

SCB = Sarah Bernsen

Job ID: 180-137587-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-4S

Lab Sample ID: 180-137587-1

Matrix: Water

Job ID: 180-137587-1

Date Collected: 05/03/22 11:45 Date Received: 05/04/22 13:40

Analyte Chloride Fluoride Sulfate			Qualifier		RL	IVID	L Uni		D	Prepared	Analyzed	Dil Fa
		150			1.0	0.7	 1 mg	/L			05/20/22 21:59	
Sulfate		0.16		(0.10	0.02	6 mg	L			05/20/22 21:59	
		450			1.0	0.7	6 mg	L/L			05/20/22 21:59	
Method: EPA 6020A -	Metals	(ICP/MS) - To	otal Reco	verable								
Analyte		•	Qualifier		RL	MD	L Uni	t	D	Prepared	Analyzed	Dil Fa
Antimony		ND		0.0	020	0.0005	1 mg	/L		05/13/22 10:12	05/14/22 18:07	
Arsenic		0.0061		0.0	010	0.0002	8 mg	L		05/13/22 10:12	05/14/22 18:07	
Barium		0.057		0.	.010	0.003	1 mg	L		05/13/22 10:12	05/14/22 18:07	
Beryllium		ND		0.0	010	0.0002	7 mg	/L		05/13/22 10:12	05/14/22 18:07	
Boron		12		(08.0	0.6	0 mg	L		05/13/22 10:12	05/17/22 12:30	1
Cadmium		ND		0.0	010	0.0002	2 mg	L		05/13/22 10:12	05/14/22 18:07	
Calcium		280		(0.50	0.1	3 mg	L		05/13/22 10:12	05/14/22 18:07	
Chromium		ND		0.0	020	0.001	5 mg	L		05/13/22 10:12	05/14/22 18:07	
Cobalt		0.0017		0.00	050	0.0002	6 mg	L		05/13/22 10:12	05/14/22 18:07	
Lead		ND		0.0	010	0.0001	7 mg	/L		05/13/22 10:12	05/14/22 18:07	
Lithium		0.0014	J	0.0	050	0.0008	3 mg	L		05/13/22 10:12	05/14/22 18:07	
Molybdenum		0.51		0.0	050	0.0006	1 mg	L		05/13/22 10:12	05/14/22 18:07	
Selenium		ND		0.0	050	0.0007	4 mg	/L		05/13/22 10:12	05/14/22 18:07	
Thallium		ND		0.0	010	0.0004	7 mg	L		05/13/22 10:12	05/14/22 18:07	
Analyte Mercury General Chemistry		ND	Qualifier	0.00	RL 020	0.0001	L Uni 3 mg		_ <u>D</u>	Prepared 05/17/22 04:57	Analyzed 05/17/22 15:03	Dil Fa
Analyte		Result	Qualifier		RL	MD	L Uni	t	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids		1300			10	1	0 mg	L_			05/05/22 17:26	-
Analyte		Result	Qualifier		RL		_ Uni	t	D	Prepared	Analyzed	Dil Fa
pH		7.6	HF		0.1	0.	1 SU				05/06/22 10:35	
Method: 9315 - Radiu	·		Count Uncert.	Total Uncert.								
Analyte		Qualifier	(2σ+/-)	(2σ+/-)		RL		Unit		Prepared	Analyzed	Dil Fa
Radium-226	0.158	U	0.250	0.251		1.00	u.431	pCi/L		05/09/22 09:56	06/07/22 16:04	
Carrier	%Yield	Qualifier	Limits							Prepared	Analyzed	Dil Fa
Ba Carrier	88.8		40 - 110								06/07/22 16:04	Diria
Method: 9320 - Radiu	m-228 (GFPC)	Count	Total								
			Count	Total								
			Uncert. (2σ+/-)	Uncert.		DI	MDO	l ln!4		Dropered	Analyzad	Di E-
A maluria	Deculé	O	1.7(7+/-)	(2σ+/-)		RL		Unit		Prepared	Analyzed	Dil Fa
Analyte Radium-228		Qualifier	<u> </u>			1.00	0.540	pCi/L		05/09/22 10:57	06/07/22 11:56	
Radium-228	0.390	Ū —	0.341	0.343		1.00	0.540	pCi/L			06/07/22 11:56	
	0.390		<u> </u>			1.00	0.540	pCi/L		Prepared	06/07/22 11:56 Analyzed 06/07/22 11:56	Dil Fa

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-4S

Lab Sample ID: 180-137587-1 Date Collected: 05/03/22 11:45

Matrix: Water

Date Received: 05/04/22 13:40

Method: Ra226	_Ra228 - Combined Radium-226 ar	nd Radium-228
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			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.547		0.423	0.425	5.00	0.540	pCi/L		06/08/22 12:54	1
226 + 228										

Client Sample ID: WAP-41 Lab Sample ID: 180-137587-2

Date Collected: 05/03/22 12:30 **Matrix: Water**

Date Received: 05/04/22 13:40

Method: EPA 9056A - Anions, Ion Chromatography

•		•							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24		1.0	0.71	mg/L			05/20/22 23:28	1
Fluoride	0.059	J	0.10	0.026	mg/L			05/20/22 23:28	1
Sulfate	38		1.0	0.76	mg/L			05/20/22 23:28	1

Method: EPA 6020A - II Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 18:21	1
Arsenic	0.012		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 18:21	1
Barium	0.15		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 18:21	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 18:21	1
Boron	0.099		0.080	0.060	mg/L		05/13/22 10:12	05/17/22 12:34	1
Cadmium	ND		0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 18:21	1
Calcium	36		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 18:21	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 18:21	1
Cobalt	0.00042	J	0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 18:21	1
Lead	0.00025	J	0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 18:21	1
Lithium	0.0030	J	0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 18:21	1
Molybdenum	0.0017	J	0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 18:21	1
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 18:21	1
Thallium	ND		0.0010	0.00047	ma/L		05/13/22 10:12	05/14/22 18:21	1

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND	0.00020	0.00013 mg/L		05/17/22 04:57	05/17/22 15:04	1

General Chemistry

Analyte	Result	Qualifier	KL	MDL	Unit	ט	Prepared	Anaiyzed	DII Fac	
Total Dissolved Solids	200		10	10	mg/L			05/05/22 17:26	1	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac	

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.485	U	0.371	0.373	1.00	0.548	pCi/L	05/09/22 09:56	06/07/22 16:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					05/09/22 09:56	06/07/22 16:04	1

Lab Sample ID: 180-137587-2 **Client Sample ID: WAP-41**

Date Collected: 05/03/22 12:30 Date Received: 05/04/22 13:40

Matrix: Water

Job ID: 180-137587-1

Analyte		Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC		Prepared	Analyzed	Dil Fac
Radium-228	0.716		0.442	0.447	1.00	0.644	pCi/L	05/09/22 10:57	06/07/22 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					05/09/22 10:57	06/07/22 11:56	1
Y Carrier	84.1		40 - 110					05/09/22 10:57	06/07/22 11:56	1

Method: 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 + 228	1.20		0.577	0.582	5.00	0.644	pCi/L		06/08/22 12:54	1

Client Sample ID: WAP-4D

Date Collected: 05/03/22 13:20

Date Received: 05/04/22 13:40

Lab Sample ID: 180-137587-3

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24		2.5	1.8	mg/L			05/20/22 22:28	2.5
Fluoride	0.10	J	0.25	0.065	mg/L			05/20/22 22:28	2.5
Sulfate	31		2.5	1.9	mg/L			05/20/22 22:28	2.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 18:25	1
Arsenic	0.0098		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 18:25	1
Barium	0.28		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 18:25	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 18:25	1
Boron	ND		0.080	0.060	mg/L		05/13/22 10:12	05/17/22 12:56	1
Cadmium	ND		0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 18:25	1
Calcium	48		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 18:25	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 18:25	1
Cobalt	ND		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 18:25	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 18:25	1
Lithium	0.0020	J	0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 18:25	1
Molybdenum	0.0055		0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 18:25	1
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 18:25	1
Thallium	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 18:25	1

Method:	EPA 7470A	- Mercury	(CVAA)

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013 mg/L		05/17/22 04:57	05/17/22 15:05	1

General Chemistry

Analyte		Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	240 Beaut	Ovalifian	10 DI		3	Б	Dromorod	05/05/22 17:26	1
Analyte pH		Qualifier HF	RL	RL 0.1	Unit SU		Prepared	Analyzed 05/06/22 10:46	Dil Fac
рп	7.9	пг	0.1	0.1	30			03/06/22 10.46	I

Lab Sample ID: 180-137587-3 **Client Sample ID: WAP-4D**

Date Collected: 05/03/22 13:20 Date Received: 05/04/22 13:40

Matrix: Water

Job ID: 180-137587-1

Method: 9315 -	Radium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.464	U	0.342	0.345	1.00	0.505	pCi/L	05/09/22 09:56	06/07/22 16:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.6		40 - 110					05/09/22 09:56	06/07/22 16:04	1

Method: 9320 - I	Radium-228 ((GFPC)								
	·	,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.547	U	0.380	0.383	1.00	0.568	pCi/L	05/09/22 10:57	06/07/22 11:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.6		40 - 110					05/09/22 10:57	06/07/22 11:56	1
Y Carrier	84.9		40 - 110					05/09/22 10:57	06/07/22 11:56	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.01		0.511	0.515	5.00	0.568	pCi/L		06/08/22 12:54	1

Lab Sample ID: 180-137587-4 **Client Sample ID: WAP-5S** Date Collected: 05/03/22 08:25 **Matrix: Water** Date Received: 05/04/22 13:40

Method: EPA 9056A -	Anions, Ion Chromat	tography							
Analyte	Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	120		1.0	0.71	mg/L			05/21/22 00:57	1
Fluoride	0.030	J	0.10	0.026	mg/L			05/21/22 00:57	1
Sulfate	400		1.0	0.76	ma/l			05/21/22 00:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 18:29	1
Arsenic	0.00039	J	0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 18:29	1
Barium	0.048		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 18:29	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 18:29	1
Boron	4.9		0.080	0.060	mg/L		05/13/22 10:12	05/17/22 12:59	1
Cadmium	ND		0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 18:29	1
Calcium	230		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 18:29	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 18:29	1
Cobalt	0.0060		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 18:29	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 18:29	1
Lithium	0.0014	J	0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 18:29	1
Molybdenum	ND		0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 18:29	1
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 18:29	1
Thallium	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 18:29	1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-5S

Lab Sample ID: 180-137587-4

Matrix: Water

Job ID: 180-137587-1

Date Collected: 05/03/22 08:25 Date Received: 05/04/22 13:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/17/22 04:57	05/17/22 15:06	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10	10	mg/L			05/05/22 17:26	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.3	HE	0.1	0.1	SU			05/06/22 10:52	1

Method: 9315 - Rad	dium-226 ((GFPC)	Count Uncert.	Total Uncert.					
Analyte Radium-226		Qualifier U	(2σ+/-) 0.300	(2σ+/-) 0.301	RL 1.00	MDC 0.482	 Prepared 05/09/22 09:56	Analyzed 06/07/22 16:04	Dil Fac
Carrier Ba Carrier	%Yield 82.0	Qualifier	Limits 40 - 110				Prepared 05/09/22 09:56	Analyzed 06/07/22 16:04	Dil Fac

Method: 9320 - F	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.501	U	0.366	0.369	1.00	0.556	pCi/L	05/09/22 10:57	06/07/22 11:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.0		40 - 110					05/09/22 10:57	06/07/22 11:57	1
Y Carrier	84.9		40 - 110					05/09/22 10:57	06/07/22 11:57	1

Method: Ra226_Ra	228 - Con	bined Rad	dium-226 a	nd Radiun	1-228					
_			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.789		0.473	0.476	5.00	0.556	pCi/L		06/08/22 12:54	1

Client Sample ID: WAP-5I
Date Collected: 05/03/22 09:20
Date Received: 05/04/22 13:40

Lab Sample ID: 180-137587-5
Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23		1.0	0.71	mg/L			05/24/22 00:52	1
Fluoride	0.22		0.10	0.026	mg/L			05/24/22 00:52	1
Sulfate	41		1.0	0.76	mg/L			05/24/22 00:52	1

Method: EPA 6020A - Me	etals (ICP/MS) - Total Recove	rable						
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 18:50	1
Arsenic	0.0043	0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 18:50	1
Barium	0.10	0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 18:50	1
Beryllium	ND	0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 18:50	1
Boron	ND	0.080	0.060	mg/L		05/13/22 10:12	05/17/22 13:14	1
Cadmium	ND	0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 18:50	1

Client Sample ID: WAP-5I

Lab Sample ID: 180-137587-5

Matrix: Water

Job ID: 180-137587-1

Date Collected: 05/03/22 09:20 Date Received: 05/04/22 13:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	38		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 18:50	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 18:50	1
Cobalt	0.00030	J	0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 18:50	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 18:50	1
Lithium	0.0031	J	0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 18:50	1
Molybdenum	0.0017	J	0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 18:50	1
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 18:50	1
Thallium	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 18:50	1
Method: EPA 7470A - Merc	cury (CVAA)								
Method: EPA 7470A - Mero Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	• •	Qualifier	RL 0.00020	MDL 0.00013		<u>D</u>	Prepared 05/17/22 04:57	Analyzed 05/17/22 15:07	Dil Fac
	Result	Qualifier				<u>D</u>			Dil Fac
Analyte Mercury General Chemistry	Result ND	Qualifier Qualifier		0.00013		<u>D</u>			Dil Fac Dil Fac
Analyte Mercury	Result ND		0.00020	0.00013	mg/L	=	05/17/22 04:57	05/17/22 15:07	1
Analyte Mercury General Chemistry Analyte	Result ND Result 200		0.00020	0.00013 MDL 10	mg/L Unit	=	05/17/22 04:57	05/17/22 15:07 Analyzed	1

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.195	U	0.201	0.202	1.00	0.315	pCi/L	05/09/22 09:56	06/07/22 16:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110					05/09/22 09:56	06/07/22 16:04	1

Method: 9320 -	Radium-228 ((GFPC)	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.289	U	0.305	0.307	1.00	0.495	pCi/L	05/09/22 10:57	06/07/22 11:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.3		40 - 110					05/09/22 10:57	06/07/22 11:57	1
Y Carrier	85.6		40 - 110					05/09/22 10:57	06/07/22 11:57	1

Method: Ra226_Ra2	228 - Con	nbined Ra	dium-226 a	nd Radiun	า-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.484	U	0.365	0.367	5.00	0.495	pCi/L		06/08/22 12:54	1

Client Sample ID: WAP-5D

Date Collected: 05/03/22 10:23

Date Received: 05/04/22 13:40

Lab Sample ID: 180-137587-6

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography									
	Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	21	1.0	0.71	mg/L			05/21/22 01:40	1

Client: Haley & Aldrich, Inc.

Job ID: 180-137587-1

Project/Site: CCR GW Monitoring FB Culley West

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

Client Sample ID: WAP-5D

ID: WAP-5D Lab Sample ID: 180-137587-6

Matrix: Water

Date Collected: 05/03/22 10:23 Date Received: 05/04/22 13:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.14		0.10	0.026	mg/L			05/21/22 01:40	1
Sulfate	42		1.0	0.76	mg/L			05/21/22 01:40	1
Method: EPA 6020A - Analyte	•	otal Recove Qualifier	erable RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	ma/L		05/13/22 10:12	05/14/22 19:08	1

Wethod: EPA 6020A - I									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 19:08	
Arsenic	0.011		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 19:08	
Barium	0.21		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 19:08	
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 19:08	
Boron	0.12		0.080	0.060	mg/L		05/13/22 10:12	05/17/22 13:32	
Cadmium	0.00024	J	0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 19:08	
Calcium	47		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 19:08	
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 19:08	
Cobalt	ND		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 19:08	
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 19:08	
Lithium	0.0016	J	0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 19:08	
Molybdenum	0.0045	J	0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 19:08	
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 19:08	
Thallium	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 19:08	

Method: EPA /4/UA - Merci	ury (CVAA)							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND	0.00020	0.00013	mg/L		05/17/22 04:57	05/17/22 15:10	1
General Chemistry Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allalyte	Nesult Qualifier	11/2	IVIDE	Oilit		ricparca	Allalyzea	Diriac

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	230		10	10	mg/L			05/05/22 17:26	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

Method: 9315 - Ra	adium-226 (GFPC)								
		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.470		0.257	0.261	1.00	0.318	pCi/L	05/09/22 09:56	06/07/22 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					05/09/22 09:56	06/07/22 16:05	1

Method: 9320 - I	rtuurum 220 (3 11 3 7	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.367	U	0.319	0.321	1.00	0.501	pCi/L	05/09/22 10:57	06/07/22 11:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					05/09/22 10:57	06/07/22 11:59	1
Y Carrier	81.9		40 - 110					05/09/22 10:57	06/07/22 11:59	1

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-5D

Lab Sample ID: 180-137587-6

Matrix: Water

Date Collected: 05/03/22 10:23 Date Received: 05/04/22 13:40

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.836		0.410	0.414	5.00	0.501	pCi/L		06/08/22 12:54	1

Client Sample ID: WAP-6S

Lab Sample ID: 180-137587-7

Date Collected: 05/03/22 13:50 **Matrix: Water**

Date Received: 05/04/22 13:40

Method: EPA 9056A - Anions, Ion Chromatography

Allalyte	Nesuit Qu	uaiiiiei iXL	MIDE	Oilit		riepaieu	Allalyzeu	Diriac
Chloride	39	1.0	0.71	mg/L	_		05/21/22 02:36	1
Fluoride	0.37	0.10	0.026	mg/L			05/21/22 02:36	1
Sulfate	130	1.0	0.76	mg/L			05/21/22 02:36	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 19:12	1
Arsenic	0.0024		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 19:12	1
Barium	0.074		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 19:12	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 19:12	1
Boron	2.4		0.080	0.060	mg/L		05/13/22 10:12	05/17/22 13:43	1
Cadmium	ND		0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 19:12	1
Calcium	110		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 19:12	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 19:12	1
Cobalt	0.0014		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 19:12	1
Lead	0.00044	J	0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 19:12	1
Lithium	0.0031	J	0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 19:12	1
Molybdenum	0.11		0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 19:12	1
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 19:12	1
Thallium	ND		0.0010	0.00047	ma/L		05/13/22 10:12	05/14/22 19:12	1

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND ND	0.00020	0.00013 mg/L	05/	/17/22 04:57	05/17/22 15:14	1

General Chemistry

Analyte	Result	Qualitier	KL	MDL	Unit	ט	Prepared	Anaiyzed	DII Fac
Total Dissolved Solids	570		10	10	mg/L			05/05/22 17:26	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
y					•		ricparca	Allulyzou	Dii i uc

Method: 9315 - Radium-226 (GFPC)

			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0252	U	0.211	0.211	1.00	0.413	pCi/L	05/09/22 09:56	06/07/22 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.0		40 - 110					05/09/22 09:56	06/07/22 16:05	1

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-6S

Lab Sample ID: 180-137587-7 Date Collected: 05/03/22 13:50

Matrix: Water

Job ID: 180-137587-1

Date Received: 05/04/22 13:40

Method: 9320 -	Radium-228 (GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.269	U	0.320	0.321	1.00	0.527	pCi/L	05/09/22 10:57	06/07/22 11:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.0		40 - 110					05/09/22 10:57	06/07/22 11:58	1
Y Carrier	84.1		40 - 110					05/09/22 10:57	06/07/22 11:58	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228 Count Total Uncert. Uncert. Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed 0.295 U 0.383 0.384 5.00 0.527 pCi/L 06/08/22 12:54 Combined Radium 226 + 228

Client Sample ID: WAP-6I Lab Sample ID: 180-137587-8 Date Collected: 05/03/22 13:00 **Matrix: Water**

Date Received: 05/04/22 13:40

Method: EPA 9056A - Anions	s, Ion Chromatography							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19	1.0	0.71	mg/L			05/21/22 03:03	1
Fluoride	0.077 J	0.10	0.026	mg/L			05/21/22 03:03	1
Sulfate	35	1.0	0.76	mg/L			05/21/22 03:03	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 19:27	1
Arsenic	0.0038		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 19:27	1
Barium	0.12		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 19:27	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 19:27	1
Boron	0.083		0.080	0.060	mg/L		05/13/22 10:12	05/17/22 13:58	1
Cadmium	ND		0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 19:27	1
Calcium	37		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 19:27	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 19:27	1
Cobalt	0.00030	J	0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 19:27	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 19:27	1
Lithium	0.0036	J	0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 19:27	1
Molybdenum	0.0065		0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 19:27	1
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 19:27	1
Thallium	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 19:27	1

Method: EPA 7470A - Merci Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/16/22 07:49	05/16/22 14:40	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	230		10	10	mg/L			05/05/22 17:26	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
		HE	0.1	0.4	SU			05/06/22 11:22	

Job ID: 180-137587-1

Lab Sample ID: 180-137587-8 **Client Sample ID: WAP-61**

Date Collected: 05/03/22 13:00 **Matrix: Water** Date Received: 05/04/22 13:40

Method: 9315 - I	Radium-226 (GFPC)								
		•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0335	U	0.201	0.201	1.00	0.405	pCi/L	05/09/22 09:56	06/07/22 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	66.8		40 - 110					05/09/22 09:56	06/07/22 16:05	1

Method: 9320 - I	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.322	U	0.370	0.371	1.00	0.607	pCi/L	05/09/22 10:57	06/07/22 11:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	66.8		40 - 110					05/09/22 10:57	06/07/22 11:58	1
Y Carrier	86.7		40 - 110					05/09/22 10:57	06/07/22 11:58	1

Method: Ra226_Ra2	228 - Com	bined Ra	dium-226 a	nd Radium	n- 22 8					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.356	U	0.421	0.422	5.00	0.607	pCi/L	-	06/08/22 12:54	1
+ 228										

Lab Sample ID: 180-137587-9 **Client Sample ID: WAP-6D** Date Collected: 05/03/22 15:00 **Matrix: Water** Date Received: 05/04/22 13:40

Method: EPA 9056A -	Anions, Ion Chromatogr	aphy						
Analyte	Result Qual	ifier RL	MDL (Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23	1.0	0.71 r	mg/L			05/21/22 05:09	1
Fluoride	0.16	0.10	0.026 r	mg/L			05/21/22 05:09	1
Sulfate	36	1.0	0.76 r	ma/l			05/21/22 05:09	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 19:30	1
Arsenic	0.0058		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 19:30	1
Barium	0.19		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 19:30	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 19:30	1
Boron	0.066	J	0.080	0.060	mg/L		05/13/22 10:12	05/17/22 14:01	1
Cadmium	ND		0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 19:30	1
Calcium	41		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 19:30	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 19:30	1
Cobalt	ND		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 19:30	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 19:30	1
Lithium	0.0026	J	0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 19:30	1
Molybdenum	0.0020	J	0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 19:30	1
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 19:30	1
Thallium	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 19:30	1

Job ID: 180-137587-1

Client Sample Results

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-6D

Lab Sample ID: 180-137587-9

Matrix: Water

Date Collected: 05/03/22 15:00 Date Received: 05/04/22 13:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/16/22 07:49	05/16/22 14:41	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	340		10	10	mg/L			05/05/22 17:26	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0	HE	0.1	0.1	SU			05/06/22 11:28	1

Method: 9315 - I	Radium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.378	U	0.267	0.269	1.00	0.379	pCi/L	05/09/22 09:56	06/07/22 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		40 - 110					05/09/22 09:56	06/07/22 16:05	1

Method: 9320 - F	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.628		0.341	0.345	1.00	0.481	pCi/L	05/09/22 10:57	06/07/22 11:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		40 - 110					05/09/22 10:57	06/07/22 11:59	1
Y Carrier	88.6		40 - 110					05/09/22 10:57	06/07/22 11:59	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	1-228					
_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.01		0.433	0.437	5.00	0.481	pCi/L		06/08/22 12:54	1

Client Sample ID: CCR-AP-7

Date Collected: 05/03/22 09:20

Date Received: 05/04/22 13:40

Lab Sample ID: 180-137587-10

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography											
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	22		1.0	0.71	mg/L			05/24/22 01:37	1		
Fluoride	0.72		0.10	0.026	mg/L			05/24/22 01:37	1		
Sulfate	86		1.0	0.76	mg/L			05/24/22 01:37	1		

Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable												
Analyte	Result Qualifier	r RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac				
Antimony	ND ND	0.0020	0.00051	mg/L		05/12/22 09:54	05/14/22 15:56	1				
Arsenic	0.00066 J	0.0010	0.00028	mg/L		05/12/22 09:54	05/14/22 15:56	1				
Barium	0.076	0.010	0.0031	mg/L		05/12/22 09:54	05/14/22 15:56	1				
Beryllium	ND	0.0010	0.00027	mg/L		05/12/22 09:54	05/14/22 15:56	1				
Boron	0.066 J	0.080	0.060	mg/L		05/12/22 09:54	05/14/22 15:56	1				
Cadmium	ND	0.0010	0.00022	mg/L		05/12/22 09:54	05/14/22 15:56	1				

Client Sample ID: CCR-AP-7

Lab Sample ID: 180-137587-10

Matrix: Water

Job ID: 180-137587-1

Date Collected: 05/03/22 09:20 Date Received: 05/04/22 13:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	94		0.50	0.13	mg/L		05/12/22 09:54	05/14/22 15:56	1
Chromium	ND		0.0020	0.0015	mg/L		05/12/22 09:54	05/14/22 15:56	1
Cobalt	ND		0.00050	0.00026	mg/L		05/12/22 09:54	05/14/22 15:56	1
Lead	ND		0.0010	0.00017	mg/L		05/12/22 09:54	05/14/22 15:56	1
Lithium	0.0072		0.0050	0.00083	mg/L		05/12/22 09:54	05/14/22 15:56	1
Molybdenum	0.0014	J	0.0050	0.00061	mg/L		05/12/22 09:54	05/14/22 15:56	1
Selenium	ND		0.0050	0.00074	mg/L		05/12/22 09:54	05/14/22 15:56	1
Thallium : : Method: EPA 7470A - Merc	ND ury (CVAA)		0.0010	0.00047	mg/L		05/12/22 09:54	05/14/22 15:56	1
-			0.0010	0.00047	mg/L		05/12/22 09:54	05/14/22 15:56	1
Method: EPA 7470A - Merc Analyte	ury (CVAA) Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Thallium Method: EPA 7470A - Merc Analyte Mercury	ury (CVAA)	Qualifier			Unit	<u>D</u>			Dil Fac
Method: EPA 7470A - Merc Analyte Mercury	ury (CVAA) Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: EPA 7470A - Merc Analyte Mercury General Chemistry	ury (CVAA) Result ND	Qualifier Qualifier	RL	MDL 0.00013	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: EPA 7470A - Merc Analyte Mercury General Chemistry	ury (CVAA) Result ND	<u>.</u>	RL	MDL 0.00013	Unit mg/L	=	Prepared 05/16/22 07:49	Analyzed 05/16/22 14:42	1
Method: EPA 7470A - Merc Analyte Mercury General Chemistry Analyte	ury (CVAA) Result ND Result 510	<u>.</u>		MDL 0.00013	Unit mg/L Unit mg/L	=	Prepared 05/16/22 07:49	Analyzed 05/16/22 14:42 Analyzed	1

Method: 3010		, 3, 1, 3,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.227	U	0.275	0.276	1.00	0.454	pCi/L	05/09/22 09:56	06/07/22 16:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					05/09/22 09:56	06/07/22 16:05	1
	Radium-228 ((GFPC)								
		()	Count	Total						

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.219	U	0.285	0.286	1.00	0.475	pCi/L	05/09/22 10:57	06/07/22 11:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					05/09/22 10:57	06/07/22 11:59	1
Y Carrier	87.5		40 - 110					05/09/22 10:57	06/07/22 11:59	1

Method: Ra226_Ra2										
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.447	U	0.396	0.397	5.00	0.475	pCi/L		06/08/22 12:54	1

Client Sample ID: DUP-1

Date Collected: 05/03/22 00:00

Matrix: Water

Date Received: 05/04/22 13:40

Method: EPA 9056A - Anions,	Ion Chromatography					
Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
Chloride	140	1.0	0.71 mg/L		05/21/22 03:45	1

Client Sample ID: DUP-1

Lab Sample ID: 180-137587-11

Matrix: Water

Job ID: 180-137587-1

Date Collected: 05/03/22 00:00 Date Received: 05/04/22 13:40

Y Carrier

86.7

Analyte		Result	Qualifier	RL	M	DL (Jnit	D	Prepared	Analyzed	Dil Fa
Fluoride		0.048	J	0.10	0.0	26 r	ng/L			05/21/22 03:45	
Sulfate		460		1.0	0.	76 n	ng/L			05/21/22 03:45	
Method: EPA 6020A	- Metals	(ICP/MS) - To	otal Reco	verable							
Analyte		Result	Qualifier	RL	M	DL (Jnit	D	Prepared	Analyzed	Dil Fa
Antimony		ND		0.0020	0.000	51 r	ng/L		05/12/22 09:54	05/14/22 16:21	
Arsenic		0.00066	J	0.0010	0.000	28 r	ng/L		05/12/22 09:54	05/14/22 16:21	
Barium		0.045		0.010	0.00	31 n	ng/L		05/12/22 09:54	05/14/22 16:21	
Beryllium		ND		0.0010	0.000	27 r	ng/L		05/12/22 09:54	05/14/22 16:21	
Boron		5.0		0.080	0.0	60 n	ng/L		05/12/22 09:54	05/14/22 16:21	
Cadmium		ND		0.0010	0.000	22 r	ng/L		05/12/22 09:54	05/14/22 16:21	
Calcium		230		0.50	0.	13 n	ng/L		05/12/22 09:54	05/14/22 16:21	
Chromium		ND		0.0020	0.00	15 n	ng/L		05/12/22 09:54	05/14/22 16:21	
Cobalt		0.0059		0.00050	0.000		-		05/12/22 09:54	05/14/22 16:21	
Lead		ND		0.0010	0.000	17 r	ng/L		05/12/22 09:54	05/14/22 16:21	
Lithium		0.0015	J	0.0050	0.000		_		05/12/22 09:54	05/14/22 16:21	
Molybdenum		0.00097		0.0050	0.000		Ü		05/12/22 09:54	05/14/22 16:21	
Selenium		ND		0.0050	0.000					05/14/22 16:21	
Thallium		ND		0.0010	0.000		Ü			05/14/22 16:21	
General Chemistry		ND Page 14	Ouglifier	0.00020	0.000			_	05/16/22 07:49		Dile
Analyte			Qualifier	RL		DL L		_ D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids		1200		10			ng/L	_	_	05/05/22 17:26	
Analyte			Qualifier	RL		RL L		_ <u>D</u>	Prepared	Analyzed	Dil Fa
pH		7.3	HF	0.1	().1 S	SU			05/06/22 11:33	
Method: 9315 - Radi	um-226 (GFPC)	Count	Total							
			Uncert.	Uncert.							
Analyte	Rosult	Qualifier	(2σ+/-)	(2σ+/-)	RL	МГ	OC Unit		Prepared	Analyzed	Dil Fa
Radium-226	0.0719		0.154	0.154	1.00	0.2			05/09/22 09:56	06/07/22 18:12	
rtadium-220	0.0713	O	0.104	0.104	1.00	0.2	04 POI/L		03/03/22 03:30	00/01/22 10:12	
Carrier	%Yield	Qualifier	Limits						Prepared	Analyzed	Dil Fa
Ba Carrier	90.3		40 - 110						05/09/22 09:56	06/07/22 18:12	
Method: 9320 - Radi	um-228 (GFPC)									
	- (•	Count	Total							
			Uncert.	Uncert.							
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	М	OC Unit		Prepared	Analyzed	Dil Fa
Radium-228	0.127		0.279	0.279	1.00		89 pCi/L		05/09/22 10:57		
-			· · ·	· · ·							
Carrier Ba Carrier	%Yield 90.3	Qualifier	Limits 40 - 110						Prepared	Analyzed 06/07/22 12:01	Dil F

05/09/22 10:57 06/07/22 12:01

40 - 110

Matrix: Water

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: DUP-1

Lab Sample ID: 180-137587-11 Date Collected: 05/03/22 00:00

Date Received: 05/04/22 13:40

_			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.199	U	0.319	0.319	5.00	0.489	pCi/L		06/08/22 12:54	1

Client Sample ID: DUP-2 Lab Sample ID: 180-137587-12 **Matrix: Water**

Date Collected: 05/03/22 00:00 Date Received: 05/04/22 13:40

Method: EPA 9056A - Anions, ion Chromatography											
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Chloride	26		1.0	0.71	mg/L			05/21/22 04:13	1	
	Fluoride	0.079	J	0.10	0.026	mg/L			05/21/22 04:13	1	
	Sulfate	43		1.0	0.76	mg/L			05/21/22 04:13	1	

Analyte	Result Q	Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.0020	0.00051	mg/L		05/12/22 09:54	05/14/22 16:36	1
Arsenic	0.0068	0.0010	0.00028	mg/L		05/12/22 09:54	05/14/22 16:36	1
Barium	0.14	0.010	0.0031	mg/L		05/12/22 09:54	05/14/22 16:36	1
Beryllium	ND	0.0010	0.00027	mg/L		05/12/22 09:54	05/14/22 16:36	1
Boron	0.085	0.080	0.060	mg/L		05/12/22 09:54	05/14/22 16:36	1
Cadmium	ND	0.0010	0.00022	mg/L		05/12/22 09:54	05/14/22 16:36	1
Calcium	35	0.50	0.13	mg/L		05/12/22 09:54	05/14/22 16:36	1
Chromium	ND	0.0020	0.0015	mg/L		05/12/22 09:54	05/14/22 16:36	1
Cobalt	0.00037 J	0.00050	0.00026	mg/L		05/12/22 09:54	05/14/22 16:36	1
Lead	ND	0.0010	0.00017	mg/L		05/12/22 09:54	05/14/22 16:36	1
Lithium	0.0032 J	0.0050	0.00083	mg/L		05/12/22 09:54	05/14/22 16:36	1
Molybdenum	0.0019 J	0.0050	0.00061	mg/L		05/12/22 09:54	05/14/22 16:36	1
Selenium	ND	0.0050	0.00074	mg/L		05/12/22 09:54	05/14/22 16:36	1
Thallium	ND	0.0010	0.00047	mg/L		05/12/22 09:54	05/14/22 16:36	1

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.00020	0.00013 mg/L		05/16/22 07:49	05/16/22 14:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids	190		10	10	mg/L			05/05/22 17:26	1	
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac	
nH	7.8	HE	0.1	0.1	SU			05/06/22 11:39	1	

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0397	U	0.206	0.206	1.00	0.415	pCi/L	05/09/22 09:56	06/07/22 18:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.3		40 - 110					05/09/22 09:56	06/07/22 18:12	1

Job ID: 180-137587-1

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

Client Sample ID: DUP-2

Lab Sample ID: 180-137587-12

Matrix: Water

Date Collected: 05/03/22 00:00 Date Received: 05/04/22 13:40

Method: 9320 -	Radium-228 ((GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.381	U	0.305	0.307	1.00	0.473	pCi/L	05/09/22 10:57	06/07/22 12:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.3		40 - 110					05/09/22 10:57	06/07/22 12:03	1
Y Carrier	83.7		40 - 110					05/09/22 10:57	06/07/22 12:03	1

Method: Ra226_Ra2	28 - Combined Ra	dium-226 a	nd Radium	-228				
_		Count	Total					
		Uncert.	Uncert.					
Analyte	Result Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.342 U	0.368	0.370	5.00	0.473 pCi/L		06/08/22 12:54	1

Client Sample ID: FIELD BLANK

Lab Sample ID: 180-137587-13 Date Collected: 05/03/22 10:10

Matrix: Water

Date Received: 05/04/22 13:40

Analyte

рН

Method: EPA 9056A - Anic Analyte	•	atography Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.81		1.0	0.71	mg/L	<u>-</u>	Теригеи	05/21/22 04:27	1
Fluoride	ND		0.10	0.026	-			05/21/22 04:27	1
Sulfate	ND		1.0		mg/L			05/21/22 04:27	1
Method: EPA 6020A - Meta	als (ICP/MS) - To	otal Recove	rable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/12/22 09:54	05/14/22 16:39	1
Arsenic	ND		0.0010	0.00028	mg/L		05/12/22 09:54	05/14/22 16:39	1
Barium	ND		0.010	0.0031	mg/L		05/12/22 09:54	05/14/22 16:39	1
Beryllium	ND		0.0010	0.00027	mg/L		05/12/22 09:54	05/14/22 16:39	1
Boron	ND		0.080	0.060	mg/L		05/12/22 09:54	05/14/22 16:39	1
Cadmium	ND		0.0010	0.00022	mg/L		05/12/22 09:54	05/14/22 16:39	1
Calcium	ND		0.50	0.13	mg/L		05/12/22 09:54	05/14/22 16:39	1
Chromium	ND		0.0020	0.0015	mg/L		05/12/22 09:54	05/14/22 16:39	1
Cobalt	ND		0.00050	0.00026	mg/L		05/12/22 09:54	05/14/22 16:39	1
Lead	ND		0.0010	0.00017	mg/L		05/12/22 09:54	05/14/22 16:39	1
Lithium	ND		0.0050	0.00083	mg/L		05/12/22 09:54	05/14/22 16:39	1
Molybdenum	ND		0.0050	0.00061	mg/L		05/12/22 09:54	05/14/22 16:39	1
Selenium	ND		0.0050	0.00074	mg/L		05/12/22 09:54	05/14/22 16:39	1
Thallium	ND		0.0010	0.00047	mg/L		05/12/22 09:54	05/14/22 16:39	1
- Method: EPA 7470A - Mer	cury (CVAA)								
Analyte	• •	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/16/22 07:49	05/16/22 14:50	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	10	mg/L			05/05/22 17:26	1

Eurofins Pittsburgh

Analyzed

05/07/22 16:31

Prepared

0.1

0.1 SU

Result Qualifier

5.9 HF

Dil Fac

Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-137587-1

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: FIELD BLANK

Lab Sample ID: 180-137587-13 Date Collected: 05/03/22 10:10 **Matrix: Water**

Date Received: 05/04/22 13:40

Method: 9315 - F	Radium-226 ((GFPC)								
	·		Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0534	U	0.184	0.184	1.00	0.393	pCi/L	05/09/22 09:56	06/07/22 18:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					05/09/22 09:56	06/07/22 18:12	1

Method: 9320 - I	Radium-228 ((GFPC)								
			Count Uncert.	Total						
Analyte	Result	Qualifier	oncert. (2σ+/-)	Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.149		0.269	0.270	1.00	0.466		05/09/22 10:57	06/07/22 12:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					05/09/22 10:57	06/07/22 12:03	1
Y Carrier	91.2		40 - 110					05/09/22 10:57	06/07/22 12:03	1

Method: Ra226_Ra2	28 - Con	nbined Rad	dium-226 a	nd Radium	-228					
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0958	U	0.326	0.327	5.00	0.466	pCi/L		06/08/22 12:54	1

Job ID: 180-137587-1

10

Project/Site: CCR GW Monitoring FB Culley West

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-399469/44

Matrix: Water

Analysis Batch: 399469

Client: Haley & Aldrich, Inc.

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

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

MB MB Analyte Result Qualifier RL **MDL** Unit Analyzed Dil Fac D **Prepared** Chloride ND 1.0 0.71 mg/L 05/20/22 23:58 0.026 mg/L Fluoride ND 0.10 05/20/22 23:58 Sulfate ND 1.0 0.76 mg/L 05/20/22 23:58

Lab Sample ID: MB 180-399469/7

Matrix: Water

Analysis Batch: 399469

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

MB MB **MDL** Unit Analyte Result Qualifier RL D Dil Fac Prepared Analyzed Chloride 0.71 mg/L ND 1.0 05/20/22 12:27 Fluoride 0.10 ND 0.026 mg/L 05/20/22 12:27 Sulfate ND 0.76 mg/L 05/20/22 12:27 1.0

Lab Sample ID: LCS 180-399469/43

Matrix: Water

Prep Type: Total/NA Analysis Batch: 399469 Spike LCS LCS %Rec

Added Result Qualifier Analyte Unit D %Rec Limits Chloride 50.0 50.3 mg/L 101 80 - 120 Fluoride 2.50 2.46 mg/L 98 80 - 120 50.0 50.8 Sulfate mg/L 102 80 - 120

Lab Sample ID: LCS 180-399469/5

Matrix: Water

Analysis Batch: 399469

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	50.0	53.4		mg/L	_	107	80 - 120	
Fluoride	2.50	2.62		mg/L		105	80 - 120	
Sulfate	50.0	54.3		mg/L		109	80 - 120	

Analysis Batch: 399469

Lab Sample ID: 180-137587-9 MS Client Sample ID: WAP-6D **Matrix: Water** Prep Type: Total/NA

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	23		50.0	78.8		mg/L		111	80 - 120	
Fluoride	0.16		2.50	2.77		mg/L		104	80 - 120	
Sulfate	36		50.0	92.5		mg/L		114	80 - 120	

Lab Sample ID: 180-137587-9 MSD

Matrix: Water

Analysis Batch: 399469

Allalysis Datell. 333403											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	23		50.0	71.0		mg/L		96	80 - 120	10	15
Fluoride	0.16		2.50	2.47		mg/L		92	80 - 120	11	15
Sulfate	36		50.0	82.2		mg/L		93	80 - 120	12	15

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Client Sample ID: WAP-6D

Prep Type: Total/NA

Client: Haley & Aldrich, Inc. Job ID: 180-137587-1

Project/Site: CCR GW Monitoring FB Culley West

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

Lab Sample ID: MB 180-399666/46

Matrix: Water

Analyte

Chloride

Fluoride

Sulfate

Analysis Batch: 399666

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

MB MB Result Qualifier RL **MDL** Unit Dil Fac D Prepared Analyzed ND 1.0 0.71 mg/L 05/24/22 00:37 0.026 mg/L ND 0.10 05/24/22 00:37 ND 1.0 0.76 mg/L 05/24/22 00:37

Lab Sample ID: LCS 180-399666/45

Matrix: Water

Analysis Batch: 399666

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 46.1 mg/L 92 80 - 120 Fluoride 2.50 2.34 mg/L 94 80 - 120 Sulfate 50.0 46.1 mg/L 92 80 - 120

Lab Sample ID: 180-137587-5 MS

Matrix: Water

Analysis Batch: 399666

Client Sample ID: WAP-5I Prep Type: Total/NA

Client Sample ID: WAP-5I

Prep Type: Total/NA

Sample Sample Spike MS MS %Rec Result Qualifier Analyte Added Result Qualifier Unit D %Rec Limits Chloride 23 50.0 68.8 mg/L 91 80 - 120 Fluoride 0.22 2.50 2.60 mg/L 95 80 - 120 50.0 85.5 90 Sulfate 41 mg/L 80 - 120

Lab Sample ID: 180-137587-5 MSD

Matrix: Water

Analysis Batch: 399666

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	23		50.0	69.8		mg/L		93	80 - 120	1	15	
Fluoride	0.22		2.50	2.56		mg/L		94	80 - 120	1	15	
Sulfate	41		50.0	86.3		mg/L		91	80 - 120	1	15	

Matrix: Water

Analysis Batch: 399666

Lab Sample ID: 180-137587-10 MS Client Sample ID: CCR-AP-7

Spike MS MS %Rec Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Chloride 22 50.0 69.6 mg/L 96 80 - 120 Fluoride 0.72 2.50 80 - 120 3.10 mg/L 95 Sulfate 50.0 134 mg/L 80 - 120

Lab Sample ID: 180-137587-10 MSD

Matrix: Water

Analysis Batch: 399666

Allalysis Datcii. 393000	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	22		50.0	67.9		mg/L		93	80 - 120	2	15
Fluoride	0.72		2.50	2.99		mg/L		91	80 - 120	4	15
Sulfate	86		50.0	129		mg/L		87	80 - 120	4	15

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Prep Type: Total/NA

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

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

Lab Sample ID: MB 180-398537/1-A

Matrix: Water

Analysis Batch: 399007

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 398537

Job ID: 180-137587-1

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/12/22 09:54	05/14/22 15:12	1
Arsenic	ND		0.0010	0.00028	mg/L		05/12/22 09:54	05/14/22 15:12	1
Barium	ND		0.010	0.0031	mg/L		05/12/22 09:54	05/14/22 15:12	1
Beryllium	ND		0.0010	0.00027	mg/L		05/12/22 09:54	05/14/22 15:12	1
Boron	ND		0.080	0.060	mg/L		05/12/22 09:54	05/14/22 15:12	1
Cadmium	0.000255	J	0.0010	0.00022	mg/L		05/12/22 09:54	05/14/22 15:12	1
Calcium	ND		0.50	0.13	mg/L		05/12/22 09:54	05/14/22 15:12	1
Chromium	ND		0.0020	0.0015	mg/L		05/12/22 09:54	05/14/22 15:12	1
Cobalt	ND		0.00050	0.00026	mg/L		05/12/22 09:54	05/14/22 15:12	1
Lead	ND		0.0010	0.00017	mg/L		05/12/22 09:54	05/14/22 15:12	1
Lithium	ND		0.0050	0.00083	mg/L		05/12/22 09:54	05/14/22 15:12	1
Molybdenum	ND		0.0050	0.00061	mg/L		05/12/22 09:54	05/14/22 15:12	1
Selenium	ND		0.0050	0.00074	mg/L		05/12/22 09:54	05/14/22 15:12	1
Thallium	ND		0.0010	0.00047	mg/L		05/12/22 09:54	05/14/22 15:12	1

MD MD

Lab Sample ID: LCS 180-398537/2-A

Matrix: Water

Analysis Batch: 399007

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

Prep Batch: 398537

7 maryolo Batom Goodo?	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	0.250	0.264		mg/L		105	80 - 120
Arsenic	1.00	1.01		mg/L		101	80 - 120
Barium	1.00	0.979		mg/L		98	80 - 120
Beryllium	0.500	0.506		mg/L		101	80 - 120
Boron	1.25	1.22		mg/L		97	80 - 120
Cadmium	0.500	0.511		mg/L		102	80 - 120
Calcium	25.0	25.4		mg/L		102	80 - 120
Chromium	0.500	0.499		mg/L		100	80 - 120
Cobalt	0.500	0.488		mg/L		98	80 - 120
Lead	0.500	0.508		mg/L		102	80 - 120
Lithium	0.500	0.460		mg/L		92	80 - 120
Molybdenum	0.500	0.510		mg/L		102	80 - 120
Selenium	1.00	0.987		mg/L		99	80 - 120
Thallium	1.00	1.02		ma/L		102	80 - 120

Lab Sample ID: 180-137587-10 MS

Matrix: Water

Analysis Batch: 399007

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

Prep Batch: 398537

	Sample S	Sample	Spike	MS	MS				%Rec	
Analyte	Result C	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	ND		0.250	0.246		mg/L		98	75 - 125	
Arsenic	0.00066 J		1.00	1.03		mg/L		103	75 - 125	
Barium	0.076		1.00	1.04		mg/L		96	75 - 125	
Beryllium	ND		0.500	0.507		mg/L		101	75 - 125	
Boron	0.066 J		1.25	1.18		mg/L		90	75 - 125	
Cadmium	ND		0.500	0.497		mg/L		99	75 - 125	
Calcium	94		25.0	121		mg/L		108	75 - 125	
Chromium	ND		0.500	0.495		mg/L		99	75 - 125	
Cobalt	ND		0.500	0.478		mg/L		96	75 - 125	

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

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

Lab Sample ID: 180-137587-10 MS

Matrix: Water

Analysis Batch: 399007

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

Prep Batch: 398537

Job ID: 180-137587-1

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Lead	ND		0.500	0.505		mg/L		101	75 - 125	
Lithium	0.0072		0.500	0.463		mg/L		91	75 - 125	
Molybdenum	0.0014	J	0.500	0.512		mg/L		102	75 - 125	
Selenium	ND		1.00	0.955		mg/L		96	75 - 125	
Thallium	ND		1.00	1.01		mg/L		101	75 - 125	

Lab Sample ID: 180-137587-10 MSD

Matrix: Water

Analysis Batch: 399007

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

Prep Batch: 398537

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND		0.250	0.244		mg/L		97	75 - 125	1	20
Arsenic	0.00066	J	1.00	1.02		mg/L		102	75 - 125	1	20
Barium	0.076		1.00	1.02		mg/L		94	75 - 125	2	20
Beryllium	ND		0.500	0.507		mg/L		101	75 - 125	0	20
Boron	0.066	J	1.25	1.22		mg/L		92	75 - 125	3	20
Cadmium	ND		0.500	0.493		mg/L		99	75 - 125	1	20
Calcium	94		25.0	119		mg/L		97	75 - 125	2	20
Chromium	ND		0.500	0.488		mg/L		98	75 - 125	2	20
Cobalt	ND		0.500	0.472		mg/L		94	75 - 125	1	20
Lead	ND		0.500	0.499		mg/L		100	75 - 125	1	20
Lithium	0.0072		0.500	0.464		mg/L		91	75 - 125	0	20
Molybdenum	0.0014	J	0.500	0.507		mg/L		101	75 - 125	1	20
Selenium	ND		1.00	0.965		mg/L		96	75 - 125	1	20

1.01

1.00

mg/L

Lab Sample ID: MB 180-398676/1-A

ND

Matrix: Water

Thallium

Analysis Batch: 399007

Client Sample ID: Method Blank Prep Type: Total Recoverable

75 - 125

101

Prep Batch: 398676

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 17:30	1
Arsenic	ND		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 17:30	1
Barium	ND		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 17:30	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 17:30	1
Boron	ND		0.080	0.060	mg/L		05/13/22 10:12	05/14/22 17:30	1
Cadmium	ND		0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 17:30	1
Calcium	ND		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 17:30	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 17:30	1
Cobalt	ND		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 17:30	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 17:30	1
Lithium	ND		0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 17:30	1
Molybdenum	ND		0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 17:30	1
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 17:30	1
Thallium	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 17:30	1

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2

3

Ē

6

0

10

12

13

RL

0.080

MDL Unit

0.060 mg/L

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

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

MB MB

ND

Result Qualifier

Matrix: Water

Analyte

Boron

Analysis Batch: 399192

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 398676

> Prepared Analyzed Dil Fac 05/13/22 10:12 05/17/22 12:23

Job ID: 180-137587-1

Lab Sample ID: LCS 180-398676/2-A

Lab Sample ID: MB 180-398676/1-A

Matrix: Water

Analysis Batch: 399007

		Client Sample ID: Lab Control Sample
		Prep Type: Total Recoverable
		Prep Batch: 398676
Spike	LCS LCS	%Rec

Analysis Batch: 399007	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	0.965		mg/L		97	80 - 120
Barium	1.00	0.928		mg/L		93	80 - 120
Beryllium	0.500	0.477		mg/L		95	80 - 120
Cadmium	0.500	0.480		mg/L		96	80 - 120
Calcium	25.0	25.3		mg/L		101	80 - 120
Chromium	0.500	0.466		mg/L		93	80 - 120
Cobalt	0.500	0.457		mg/L		91	80 - 120
Lead	0.500	0.479		mg/L		96	80 - 120
Lithium	0.500	0.439		mg/L		88	80 - 120
Molybdenum	0.500	0.482		mg/L		96	80 - 120
Selenium	1.00	0.924		mg/L		92	80 - 120
Thallium	1.00	0.957		mg/L		96	80 - 120

Lab Sample ID: LCS 180-398676/2-A

Matrix: Water

Analysis Batch: 399192

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 398676

Client Sample ID: WAP-5I

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Boron 1.25 1.11 mg/L 80 - 120

Lab Sample ID: 180-137587-5 MS

Matrix: Water Analysis Batch: 399007							F	Prep Ty	pe: Total Recoverable Prep Batch: 398676
	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	ND		0.250	0.258		mg/L		103	75 - 125
Arsenic	0.0043		1.00	0.973		mg/L		97	75 - 125
Barium	0.10		1.00	1.00		mg/L		90	75 - 125
Beryllium	ND		0.500	0.475		mg/L		95	75 - 125
Cadmium	ND		0.500	0.467		mg/L		93	75 - 125
Calcium	38		25.0	62.1		mg/L		98	75 - 125
Chromium	ND		0.500	0.458		mg/L		92	75 - 125
Cobalt	0.00030	J	0.500	0.444		mg/L		89	75 - 125
Lead	ND		0.500	0.469		mg/L		94	75 - 125
Lithium	0.0031	J	0.500	0.428		mg/L		85	75 - 125
Molybdenum	0.0017	J	0.500	0.476		mg/L		95	75 - 125
Selenium	ND		1.00	0.891		mg/L		89	75 - 125
Thallium	ND		1.00	0.943		mg/L		94	75 - 125

10

20

20

2

Prep Batch: 398860

Job ID: 180-137587-1 Project/Site: CCR GW Monitoring FB Culley West

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

Lab Sample ID: 180-137587-5 MS Client Sample ID: WAP-5I **Matrix: Water Prep Type: Total Recoverable** Analysis Batch: 399192 Prep Batch: 398676

Sample Sample Spike MS MS %Rec Result Qualifier Result Qualifier Added Limits Analyte Unit D %Rec Boron ND 1.25 1.16 mg/L 93 75 - 125

Lab Sample ID: 180-137587-5 MSD Client Sample ID: WAP-5I **Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 399007 Prep Batch: 398676 Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier D %Rec Limits RPD Limit Analyte Unit Antimony ND 0.250 0.247 mg/L 99 75 - 125 4 20 0.0043 Arsenic 1.00 0.934 mg/L 93 75 - 125 4 20 Barium 0.10 1.00 0.960 mg/L 86 75 - 125 4 20 Beryllium ND 0.500 0.464 93 75 - 125 2 20 mg/L Cadmium ND 0.500 0.453 mg/L 91 75 - 125 3 20 Calcium 38 25.0 58.3 mg/L 82 75 - 125 6 20 ND 0.500 86 75 - 125 6 20 Chromium 0.432 mg/L 0.00030 J Cobalt 0.500 0.420 mg/L 84 75 - 125 20 Lead NΩ 0.500 0 449 mg/L ٩n 75 - 12520 0.0031 0.500 0.414 82 75 - 125 20 Lithium mg/L 75 - 125 0.0017 0.500 0.457 91 20 Molybdenum mg/L 1.00 0.860 mg/L 86 75 - 125 20 Selenium ND

Lab Sample ID: 180-137587-5 MSD Client Sample ID: WAP-5I **Prep Type: Total Recoverable Matrix: Water**

0.902

1.14

mg/L

mg/L

90

91

75 - 125

75 - 125

1.00

1.25

Analysis Batch: 399192 Prep Batch: 398676 Sample Sample Spike MSD MSD %Rec **RPD** Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits **RPD** Limit

Method: EPA 7470A - Mercury (CVAA)

ND

ND

Thallium

Boron

Lab Sample ID: MB 180-398860/1-A Client Sample ID: Method Blank **Matrix: Water Prep Type: Total/NA**

Analysis Batch: 398978 MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 0.00020 0.00013 mg/L 05/16/22 07:49 05/16/22 14:35 Mercury ND

Lab Sample ID: LCS 180-398860/2-A **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Prep Batch: 398860 Analysis Batch: 398978 Spike LCS LCS %Rec Added Result Qualifier Unit %Rec Limits Analyte D 0.00250 80 - 120 Mercury 0.00228 mg/L 91

Lab Sample ID: 180-137587-10 MS Client Sample ID: CCR-AP-7 **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 398978 Prep Batch: 398860 Sample Sample Spike MS MS %Rec

Result Qualifier Analyte Added Result Qualifier Unit %Rec Limits Mercury ND 0.00100 0.000924 92 75 - 125 mg/L

Job ID: 180-137587-1

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: 180-137587-10 MSD Client Sample ID: CCR-AP-7 **Matrix: Water**

Analysis Batch: 398978

Prep Type: Total/NA **Prep Batch: 398860** Sample Sample Spike MSD MSD %Rec **RPD**

Mercury

Analyte

Mercury

Analyte Mercury

Result Qualifier Added 0.00100 ND

Result Qualifier 0.000886

Unit

%Rec mg/L 89

Limits 75 - 125

RPD Limit

20

4

Lab Sample ID: MB 180-399000/1-A

Matrix: Water

Analysis Batch: 399123

ND

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

Prep Batch: 399000

MB MB

Result Qualifier Analyte

RL 0.00020

MDL Unit 0.00013 mg/L

Prepared 05/17/22 04:57 05/17/22 15:00

Dil Fac Analyzed

10

Lab Sample ID: LCS 180-399000/2-A

Matrix: Water

Analysis Batch: 399123

Spike Added

ND

LCS LCS

0.00253

0.000971

Result Qualifier Unit D

mg/L

mg/L

Prep Batch: 399000 %Rec

Prep Type: Total/NA

%Rec

Client Sample ID: Lab Control Sample

Limits

Client Sample ID: WAP-5I

80 - 120

Lab Sample ID: 180-137587-5 MS

Matrix: Water

Analysis Batch: 399123

Spike MS MS Sample Sample

0.00100

0.00250

%Rec

75 - 125

Prep Type: Total/NA Prep Batch: 399000

Result Qualifier Added Result Qualifier Unit %Rec Limits

Analyte Mercury

Lab Sample ID: 180-137587-5 MSD

Matrix: Water

Analysis Batch: 399123

Client Sample ID: WAP-5I Prep Type: Total/NA

Prep Batch: 399000

MSD MSD Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit %Rec ND 0.00100 97 75 - 125 Mercury 0.000973 mg/L

Spike

Added

7.00

%Rec Limits

RPD RPD Limit

20

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-397958/3

Matrix: Water

Analysis Batch: 397958

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

SU

Analyte

pН

%Rec Unit %Rec Limits 100 99 - 101

Lab Sample ID: 180-137587-5 DU

Matrix: Water

Analyte

рН

Analysis Batch: 397958

Sample Sample Result Qualifier

7.7 HF

DU DU Result Qualifier

7.7 HF

7.0

LCS LCS

Result Qualifier

Unit D SU

Prep Type: Total/NA

RPD RPD Limit 0.6

Client Sample ID: WAP-5I

Spike

Added

MB MB Result Qualifier

ND

Sample Sample

Sample Sample Result Qualifier

510

200

Result Qualifier

7.00

Spike

Added

251

RL

10

DU DU

7.7 HF

LCS LCS

7.0

Result Qualifier

MDL Unit

LCS LCS

DU DU

DU DU

558

Result Qualifier

199

Result Qualifier

254

Result Qualifier

10 mg/L

Result Qualifier

Unit

SU

Unit

SU

Unit

mg/L

Unit

mg/L

Unit

mg/L

D

D %Rec

Prepared

D %Rec

101

100

10

RPD

Limit

Dil Fac

RPD

Limit

RPD

Limit

Dil Fac

Job ID: 180-137587-1

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

RPD

0.4

Client Sample ID: CCR-AP-7

Client Sample ID: Lab Control Sample

%Rec

Limits

99 - 101

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

%Rec

Limits

85 - 115

Client Sample ID: WAP-5I

Client Sample ID: CCR-AP-7

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA **Prep Batch: 564511**

RPD

RPD

Analyzed

05/05/22 17:26

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Method: EPA 9040C - pH (Continued)

Lab Sample ID: 180-137587-10 DU

Matrix: Water

Analysis Batch: 397958

Sample Sample Result Qualifier Analyte рН 7.6 HF

Lab Sample ID: LCS 180-398030/1

Matrix: Water Analysis Batch: 398030

Analyte

рΗ

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

Lab Sample ID: MB 180-397818/2

Matrix: Water

Analysis Batch: 397818

Analyte

Total Dissolved Solids

Lab Sample ID: LCS 180-397818/1

Matrix: Water

Analysis Batch: 397818

Analyte

Total Dissolved Solids

Lab Sample ID: 180-137587-5 DU

Matrix: Water

Analysis Batch: 397818

Analyte Total Dissolved Solids

Lab Sample ID: 180-137587-10 DU **Matrix: Water**

Analysis Batch: 397818

Analyte

Total Dissolved Solids Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-564511/24-A

Matrix: Water

Analysis Batch: 568823

MB MB

Result Qualifier Analyte Radium-226 0.1833 U

0.211

 $(2\sigma + / -)$ $(2\sigma + / -)$ 0.212

Count

Uncert.

Total

Uncert.

RL 1.00

0.343 pCi/L

MDC Unit

Prepared 05/09/22 10:23 06/07/22 18:13

Client Sample ID: Method Blank

Analyzed

10

Project/Site: CCR GW Monitoring FB Culley West

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: MB 160-564511/24-A

Matrix: Water

Analysis Batch: 568823

MB MB

%Yield Qualifier Limits Carrier Ba Carrier 87.8 40 - 110 Client Sample ID: Method Blank

Prep Type: Total/NA

Job ID: 180-137587-1

Prep Batch: 564511

Dil Fac

05/09/22 10:23 06/07/22 18:13

Analyzed

Lab Sample ID: LCS 160-564511/1-A

Matrix: Water

Analyte

Analyte

Radium-226

Radium-226

Analysis Batch: 569008

Client Sample ID: Lab Control Sample

Prepared

Prep Type: Total/NA

Prep Batch: 564511

Total LCS LCS **Spike**

Added Result Qual

9.113

MS MS

MS MS

Result Qual

11.08

Result Qual

9.846

Uncert. $(2\sigma + / -)$

1.24

RL**MDC** Unit 0.405 pCi/L

%Rec %Rec Limits

75 - 125

80

LCS LCS

Sample Sample

Result Qual

0.195 U

11.3

Carrier %Yield Qualifier Limits Ba Carrier 94.8 40 - 110

Lab Sample ID: 180-137587-5 MS

Client Sample ID: WAP-5I

Prep Type: Total/NA

Prep Batch: 564511

Analysis Batch: 569008

Matrix: Water

Total

1.32

Uncert. $(2\sigma + / -)$

RL 1.00

1.00

1.00

MDC Unit 0.344 pCi/L

0.349 pCi/L

%Rec

85

%Rec

75

%Rec

Limits

60 - 140

%Rec

Limits

60 - 140

MS MS

Carrier %Yield Qualifier Ba Carrier 91.8

Limits 40 - 110

Spike

Added

11.4

Lab Sample ID: 180-137587-5 MSD

Matrix: Water

Matrix: Water

Analyte

Radium-226

Analysis Batch: 569008

Client Sample ID: WAP-5I

Prep Type: Total/NA **Prep Batch: 564511**

RER

0.48

RER

Limit

Total

1.20

Sample Sample **Spike** MSD MSD Uncert. Result Qual Added Result Qual $(2\sigma + / -)$ RLMDC Unit

Analyte 0.195 U Radium-226 11.3 8.637

MSD MSD

Carrier %Yield Qualifier Limits 40 - 110 Ba Carrier 92.3

Lab Sample ID: 180-137587-10 MS

Client Sample ID: CCR-AP-7

Prep Type: Total/NA **Prep Batch: 564511**

Analysis Batch: 568835 Total

Spike

Added

11.4

Uncert. $(2\sigma + / -)$

1.78

RL **MDC** Unit 1.00

%Rec 0.799 pCi/L

%Rec Limits

60 - 140

0.227 U MS MS

Sample Sample

Result Qual

%Yield Qualifier Limits Carrier 41.4 40 - 110 Ba Carrier

Client: Haley & Aldrich, Inc. Job ID: 180-137587-1

Project/Site: CCR GW Monitoring FB Culley West

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 180-137587-10 MSD Client Sample ID: CCR-AP-7

Matrix: Water

Analysis Batch: 568823

Prep Type: Total/NA

Prep Batch: 564511

Total Spike MSD MSD %Rec **RER** Sample Sample Uncert. Analyte Result Qual Added Result Qual $(2\sigma + / -)$ RL MDC Unit %Rec Limits RER Limit Radium-226 0.227 U 11.4 10.84 1.40 1.00 0.306 pCi/L 60 - 140 0.08

MSD MSD

Carrier %Yield Qualifier Limits Ba Carrier 90.5 40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-564514/24-A

Matrix: Water

Analysis Batch: 568850

Count

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

Prep Batch: 564514

10

Total MB MB Uncert. Uncert. **Analyte** Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-228 05/09/22 10:57 06/07/22 12:04 0.02418 0.253 0.253 1.00 0.471 pCi/L

MB MB

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 87.8 40 - 110 05/09/22 10:57 06/07/22 12:04 Y Carrier 91.6 40 - 110 05/09/22 10:57 06/07/22 12:04

Lab Sample ID: LCS 160-564514/1-A

Matrix: Water

Analysis Batch: 568835

Client Sample ID: Lab Control Sample

%Rec

Prep Type: Total/NA

Prep Batch: 564514

Total

8.60

Spike LCS LCS Uncert.

Added Result Qual $(2\sigma + / -)$ RLLimits **Analyte** MDC Unit %Rec Radium-228 8.55 9.254 1.24 1.00 0.525 pCi/L 108 75 - 125

LCS LCS

Carrier %Yield Qualifier Limits Ba Carrier 94 8 40 - 110 Y Carrier 84.1 40 - 110

Lab Sample ID: 180-137587-5 MS

9.885

Matrix: Water

Analysis Batch: 568835

Client Sample ID: WAP-5I Prep Type: Total/NA

112

Prep Batch: 564514

60 - 140

Sample Sample Spike MS MS Uncert. %Rec Analyte Result Qual Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits Radium-228

Total

1.32

1.00

0.551 pCi/L

0.289 U MS MS

Carrier %Yield Qualifier Limits Ba Carrier 91.8 40 - 110 83.4 40 - 110 Y Carrier

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

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

Matrix: Water

Analysis Batch: 568835

Lab Sample ID: 180-137587-5 MSD

Client Sample ID: WAP-5I

Prep Type: Total/NA Prep Batch: 564514

Prep Batch: 564514

Job ID: 180-137587-1

						iotai							
	Sample	Sample	Spike	MSD	MSD	Uncert.					%Rec		RER
Analyte	Result	Qual	Added	Result	Qual	(2σ+/-)	RL	MDC	Unit	%Rec	Limits	RER	Limit
Radium-228	0.289	U	8.53	9.002		1.23	1.00	0.530	pCi/L	102	60 - 140	0.35	1

MSD MSD

Carrier	%Yield	Qualifier	Limits
Ba Carrier	92.3		40 - 110
Y Carrier	81.9		40 - 110

Lab Sample ID: 180-137587-10 MS **Client Sample ID: CCR-AP-7 Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 568835

Total Uncert. %Rec

Sample Sample Spike MS MS Analyte Result Qual Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits 60 - 140 Radium-228 0.219 U 1.26 1.00 0.877 pCi/L 8.61 6.112 68

MS MS

Carrier	%Yield	Qualifier	Limits
Ba Carrier	41.4		40 - 110
Y Carrier	87.9		40 - 110

Lab Sample ID: 180-137587-10 MSD **Client Sample ID: CCR-AP-7**

Matrix: Water

Analysis Batch: 568835

Prep Type: Total/NA Prep Batch: 564514 Total

	Sample Sample	Spike	MSD	MSD	Uncert.				%Rec		RER
Analyte	Result Qual	Added	Result	Qual	(2σ+/-)	RL	MDC Unit	%Rec	Limits	RER	Limit
Radium-228	0.219 IJ	8 62	6 954		1.01	1.00	0.399 pCi/l	78	60 - 140	0.37	

	MSD	MSD	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	90.5		40 - 110
Y Carrier	88.2		40 - 110

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6/8/2022 (Rev. 1)

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

HPLC/IC

Analysis Batch: 399469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
180-137587-1	WAP-4S	Total/NA	Water	EPA 9056A	
180-137587-2	WAP-4I	Total/NA	Water	EPA 9056A	
180-137587-3	WAP-4D	Total/NA	Water	EPA 9056A	
180-137587-4	WAP-5S	Total/NA	Water	EPA 9056A	
180-137587-6	WAP-5D	Total/NA	Water	EPA 9056A	
180-137587-7	WAP-6S	Total/NA	Water	EPA 9056A	
180-137587-8	WAP-6I	Total/NA	Water	EPA 9056A	
180-137587-9	WAP-6D	Total/NA	Water	EPA 9056A	
180-137587-11	DUP-1	Total/NA	Water	EPA 9056A	
180-137587-12	DUP-2	Total/NA	Water	EPA 9056A	
180-137587-13	FIELD BLANK	Total/NA	Water	EPA 9056A	
MB 180-399469/44	Method Blank	Total/NA	Water	EPA 9056A	
MB 180-399469/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-399469/43	Lab Control Sample	Total/NA	Water	EPA 9056A	
LCS 180-399469/5	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-137587-9 MS	WAP-6D	Total/NA	Water	EPA 9056A	
180-137587-9 MSD	WAP-6D	Total/NA	Water	EPA 9056A	

Analysis Batch: 399666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-5	WAP-5I	Total/NA	Water	EPA 9056A	
180-137587-10	CCR-AP-7	Total/NA	Water	EPA 9056A	
MB 180-399666/46	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-399666/45	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-137587-5 MS	WAP-5I	Total/NA	Water	EPA 9056A	
180-137587-5 MSD	WAP-5I	Total/NA	Water	EPA 9056A	
180-137587-10 MS	CCR-AP-7	Total/NA	Water	EPA 9056A	
180-137587-10 MSD	CCR-AP-7	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 398537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-10	CCR-AP-7	Total Recoverable	Water	3005A	_
180-137587-11	DUP-1	Total Recoverable	Water	3005A	
180-137587-12	DUP-2	Total Recoverable	Water	3005A	
180-137587-13	FIELD BLANK	Total Recoverable	Water	3005A	
MB 180-398537/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-398537/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-137587-10 MS	CCR-AP-7	Total Recoverable	Water	3005A	
180-137587-10 MSD	CCR-AP-7	Total Recoverable	Water	3005A	

Prep Batch: 398676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-1	WAP-4S	Total Recoverable	Water	3005A	
180-137587-2	WAP-4I	Total Recoverable	Water	3005A	
180-137587-3	WAP-4D	Total Recoverable	Water	3005A	
180-137587-4	WAP-5S	Total Recoverable	Water	3005A	
180-137587-5	WAP-5I	Total Recoverable	Water	3005A	
180-137587-6	WAP-5D	Total Recoverable	Water	3005A	
180-137587-7	WAP-6S	Total Recoverable	Water	3005A	

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Job ID: 180-137587-1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Metals (Continued)

Prep Batch: 398676 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-8	WAP-6I	Total Recoverable	Water	3005A	
180-137587-9	WAP-6D	Total Recoverable	Water	3005A	
MB 180-398676/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-398676/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-137587-5 MS	WAP-5I	Total Recoverable	Water	3005A	
180-137587-5 MSD	WAP-5I	Total Recoverable	Water	3005A	

Prep Batch: 398860

Lab Sample ID 180-137587-8	Client Sample ID WAP-6I	Prep Type Total/NA	Matrix Water	Method 7470A	Prep Batch
180-137587-9	WAP-6D	Total/NA	Water	7470A	
180-137587-10	CCR-AP-7	Total/NA	Water	7470A	
180-137587-11	DUP-1	Total/NA	Water	7470A	
180-137587-12	DUP-2	Total/NA	Water	7470A	
180-137587-13	FIELD BLANK	Total/NA	Water	7470A	
MB 180-398860/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-398860/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-137587-10 MS	CCR-AP-7	Total/NA	Water	7470A	
180-137587-10 MSD	CCR-AP-7	Total/NA	Water	7470A	

Analysis Batch: 398978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-8	WAP-6I	Total/NA	Water	EPA 7470A	398860
180-137587-9	WAP-6D	Total/NA	Water	EPA 7470A	398860
180-137587-10	CCR-AP-7	Total/NA	Water	EPA 7470A	398860
180-137587-11	DUP-1	Total/NA	Water	EPA 7470A	398860
180-137587-12	DUP-2	Total/NA	Water	EPA 7470A	398860
180-137587-13	FIELD BLANK	Total/NA	Water	EPA 7470A	398860
MB 180-398860/1-A	Method Blank	Total/NA	Water	EPA 7470A	398860
LCS 180-398860/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	398860
180-137587-10 MS	CCR-AP-7	Total/NA	Water	EPA 7470A	398860
180-137587-10 MSD	CCR-AP-7	Total/NA	Water	EPA 7470A	398860

Prep Batch: 399000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-1	WAP-4S	Total/NA	Water	7470A	
180-137587-2	WAP-4I	Total/NA	Water	7470A	
180-137587-3	WAP-4D	Total/NA	Water	7470A	
180-137587-4	WAP-5S	Total/NA	Water	7470A	
180-137587-5	WAP-5I	Total/NA	Water	7470A	
180-137587-6	WAP-5D	Total/NA	Water	7470A	
180-137587-7	WAP-6S	Total/NA	Water	7470A	
MB 180-399000/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-399000/2-A	Lab Control Sample	Total/NA	Water	7470A	
180-137587-5 MS	WAP-5I	Total/NA	Water	7470A	
180-137587-5 MSD	WAP-5I	Total/NA	Water	7470A	

Analysis Batch: 399007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-1	WAP-4S	Total Recoverable	Water	EPA 6020A	398676
180-137587-2	WAP-4I	Total Recoverable	Water	EPA 6020A	398676

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Job ID: 180-137587-1

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Client: Haley & Aldrich, Inc. Job ID: 180-137587-1

Project/Site: CCR GW Monitoring FB Culley West

Metals (Continued)

Analysis Batch: 399007 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-3	WAP-4D	Total Recoverable	Water	EPA 6020A	398676
180-137587-4	WAP-5S	Total Recoverable	Water	EPA 6020A	398676
180-137587-5	WAP-5I	Total Recoverable	Water	EPA 6020A	398676
180-137587-6	WAP-5D	Total Recoverable	Water	EPA 6020A	398676
180-137587-7	WAP-6S	Total Recoverable	Water	EPA 6020A	398676
180-137587-8	WAP-6I	Total Recoverable	Water	EPA 6020A	398676
180-137587-9	WAP-6D	Total Recoverable	Water	EPA 6020A	398676
180-137587-10	CCR-AP-7	Total Recoverable	Water	EPA 6020A	398537
180-137587-11	DUP-1	Total Recoverable	Water	EPA 6020A	398537
180-137587-12	DUP-2	Total Recoverable	Water	EPA 6020A	398537
180-137587-13	FIELD BLANK	Total Recoverable	Water	EPA 6020A	398537
MB 180-398537/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	398537
MB 180-398676/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	398676
LCS 180-398537/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	398537
LCS 180-398676/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	398676
180-137587-5 MS	WAP-5I	Total Recoverable	Water	EPA 6020A	398676
180-137587-5 MSD	WAP-5I	Total Recoverable	Water	EPA 6020A	398676
180-137587-10 MS	CCR-AP-7	Total Recoverable	Water	EPA 6020A	398537
180-137587-10 MSD	CCR-AP-7	Total Recoverable	Water	EPA 6020A	398537

Analysis Batch: 399123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-1	WAP-4S	Total/NA	Water	EPA 7470A	399000
180-137587-2	WAP-4I	Total/NA	Water	EPA 7470A	399000
180-137587-3	WAP-4D	Total/NA	Water	EPA 7470A	399000
180-137587-4	WAP-5S	Total/NA	Water	EPA 7470A	399000
180-137587-5	WAP-5I	Total/NA	Water	EPA 7470A	399000
180-137587-6	WAP-5D	Total/NA	Water	EPA 7470A	399000
180-137587-7	WAP-6S	Total/NA	Water	EPA 7470A	399000
MB 180-399000/1-A	Method Blank	Total/NA	Water	EPA 7470A	399000
LCS 180-399000/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	399000
180-137587-5 MS	WAP-5I	Total/NA	Water	EPA 7470A	399000
180-137587-5 MSD	WAP-5I	Total/NA	Water	EPA 7470A	399000

Analysis Batch: 399192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-1	WAP-4S	Total Recoverable	Water	EPA 6020A	398676
180-137587-2	WAP-4I	Total Recoverable	Water	EPA 6020A	398676
180-137587-3	WAP-4D	Total Recoverable	Water	EPA 6020A	398676
180-137587-4	WAP-5S	Total Recoverable	Water	EPA 6020A	398676
180-137587-5	WAP-5I	Total Recoverable	Water	EPA 6020A	398676
180-137587-6	WAP-5D	Total Recoverable	Water	EPA 6020A	398676
180-137587-7	WAP-6S	Total Recoverable	Water	EPA 6020A	398676
180-137587-8	WAP-6I	Total Recoverable	Water	EPA 6020A	398676
180-137587-9	WAP-6D	Total Recoverable	Water	EPA 6020A	398676
MB 180-398676/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	398676
LCS 180-398676/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	398676
180-137587-5 MS	WAP-5I	Total Recoverable	Water	EPA 6020A	398676
180-137587-5 MSD	WAP-5I	Total Recoverable	Water	EPA 6020A	398676

Client: Haley & Aldrich, Inc. Job ID: 180-137587-1

Project/Site: CCR GW Monitoring FB Culley West

General Chemistry

Analysis Batch: 397818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
180-137587-1	WAP-4S	Total/NA	Water	SM 2540C	
180-137587-2	WAP-4I	Total/NA	Water	SM 2540C	
180-137587-3	WAP-4D	Total/NA	Water	SM 2540C	
180-137587-4	WAP-5S	Total/NA	Water	SM 2540C	
180-137587-5	WAP-5I	Total/NA	Water	SM 2540C	
180-137587-6	WAP-5D	Total/NA	Water	SM 2540C	
180-137587-7	WAP-6S	Total/NA	Water	SM 2540C	
180-137587-8	WAP-6I	Total/NA	Water	SM 2540C	
180-137587-9	WAP-6D	Total/NA	Water	SM 2540C	
180-137587-10	CCR-AP-7	Total/NA	Water	SM 2540C	
180-137587-11	DUP-1	Total/NA	Water	SM 2540C	
180-137587-12	DUP-2	Total/NA	Water	SM 2540C	
180-137587-13	FIELD BLANK	Total/NA	Water	SM 2540C	
MB 180-397818/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-397818/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-137587-5 DU	WAP-5I	Total/NA	Water	SM 2540C	
180-137587-10 DU	CCR-AP-7	Total/NA	Water	SM 2540C	

Analysis Batch: 397958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-1	WAP-4S	Total/NA	Water	EPA 9040C	
180-137587-2	WAP-4I	Total/NA	Water	EPA 9040C	
180-137587-3	WAP-4D	Total/NA	Water	EPA 9040C	
180-137587-4	WAP-5S	Total/NA	Water	EPA 9040C	
180-137587-5	WAP-5I	Total/NA	Water	EPA 9040C	
180-137587-6	WAP-5D	Total/NA	Water	EPA 9040C	
180-137587-7	WAP-6S	Total/NA	Water	EPA 9040C	
180-137587-8	WAP-6I	Total/NA	Water	EPA 9040C	
180-137587-9	WAP-6D	Total/NA	Water	EPA 9040C	
180-137587-10	CCR-AP-7	Total/NA	Water	EPA 9040C	
180-137587-11	DUP-1	Total/NA	Water	EPA 9040C	
180-137587-12	DUP-2	Total/NA	Water	EPA 9040C	
LCS 180-397958/3	Lab Control Sample	Total/NA	Water	EPA 9040C	
180-137587-5 DU	WAP-5I	Total/NA	Water	EPA 9040C	
180-137587-10 DU	CCR-AP-7	Total/NA	Water	EPA 9040C	

Analysis Batch: 398030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-13	FIELD BLANK	Total/NA	Water	EPA 9040C	
LCS 180-398030/1	Lab Control Sample	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 564511

Lab Sample ID 180-137587-1	Client Sample ID WAP-4S	Prep Type Total/NA	Matrix Water	Method PrecSep-21	Prep Batch
180-137587-2	WAP-4I	Total/NA	Water	PrecSep-21	
180-137587-3	WAP-4D	Total/NA	Water	PrecSep-21	
180-137587-4	WAP-5S	Total/NA	Water	PrecSep-21	
180-137587-5	WAP-5I	Total/NA	Water	PrecSep-21	
180-137587-6	WAP-5D	Total/NA	Water	PrecSep-21	

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Rad (Continued)

Prep Batch: 564511 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-7	WAP-6S	Total/NA	Water	PrecSep-21	
180-137587-8	WAP-6I	Total/NA	Water	PrecSep-21	
180-137587-9	WAP-6D	Total/NA	Water	PrecSep-21	
180-137587-10	CCR-AP-7	Total/NA	Water	PrecSep-21	
180-137587-11	DUP-1	Total/NA	Water	PrecSep-21	
180-137587-12	DUP-2	Total/NA	Water	PrecSep-21	
180-137587-13	FIELD BLANK	Total/NA	Water	PrecSep-21	
MB 160-564511/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-564511/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
180-137587-5 MS	WAP-5I	Total/NA	Water	PrecSep-21	
180-137587-5 MSD	WAP-5I	Total/NA	Water	PrecSep-21	
180-137587-10 MS	CCR-AP-7	Total/NA	Water	PrecSep-21	
180-137587-10 MSD	CCR-AP-7	Total/NA	Water	PrecSep-21	

Prep Batch: 564514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137587-1	WAP-4S	Total/NA	Water	PrecSep_0	
180-137587-2	WAP-4I	Total/NA	Water	PrecSep_0	
180-137587-3	WAP-4D	Total/NA	Water	PrecSep_0	
180-137587-4	WAP-5S	Total/NA	Water	PrecSep_0	
180-137587-5	WAP-5I	Total/NA	Water	PrecSep_0	
180-137587-6	WAP-5D	Total/NA	Water	PrecSep_0	
180-137587-7	WAP-6S	Total/NA	Water	PrecSep_0	
180-137587-8	WAP-6I	Total/NA	Water	PrecSep_0	
180-137587-9	WAP-6D	Total/NA	Water	PrecSep_0	
180-137587-10	CCR-AP-7	Total/NA	Water	PrecSep_0	
180-137587-11	DUP-1	Total/NA	Water	PrecSep_0	
180-137587-12	DUP-2	Total/NA	Water	PrecSep_0	
180-137587-13	FIELD BLANK	Total/NA	Water	PrecSep_0	
MB 160-564514/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-564514/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
180-137587-5 MS	WAP-5I	Total/NA	Water	PrecSep_0	
180-137587-5 MSD	WAP-5I	Total/NA	Water	PrecSep_0	
180-137587-10 MS	CCR-AP-7	Total/NA	Water	PrecSep_0	
180-137587-10 MSD	CCR-AP-7	Total/NA	Water	PrecSep_0	

Job ID: 180-137587-1

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Eurofins Pittsburgh

301 Alpha Drive RIDC Park

Pittsburgh, PA 15238

Chain of Custody Record



Environment Testing America

Phone: 412-963-7058 Fax: 412-963-2468	lo		Lat Diff			
Client Information	Sampler:	Hill	Lab PM: Hayes, Ker	1	Carrier Tracking No(s):	COC No: 180-80665-14503.1
Client Contact: Mark Breting		173.1325	E-Mail: Ken.Hayes	@et.eurofinsus.com	State of Origin:	Page: Page 1 of 3 2
Company: Atlas Technical Consultants LLC		PWSID:		Analysis Ro	equested	Job #:
Address: 7988 Centerpoint Drive Suite 100	Due Date Requested:					Preservation Codes:
City: Indianapolis	TAT Requested (days)	:				A - HCL
State, Zip: IN, 46256	Compliance Project:	A Yes A No				D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3
Phone:	PO#:					F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4
864-214-8750(Tel) Email:	FB-242026, AB-24 WO#:	1410	(ô)			H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone
mark.breting@atcassociates.com			1			J - DI Water V - MCAA
Project Name: CCR GW Monitoring FB Culley West	Project #: 18016014		(Ye	8 80		K - EDTA W - pH 4-5 L - EDA Z - other (specify)
Site:	SSOW#:		Sample (Yes or No)	ORGFM_28D - TDS - 5320_R8228		L - EDA Z - other (specify) Other:
Sample Identification		Type (Matrix De Wisk Wewster, Sesolid, rwaste/oil, issue, A=Air)	9040C, 9066A_ORG 6020A, 7470A 2640C_Calod - TDS 9316_Ra226, 9320_F	80-137587 Chain	Special Instructions/Note:
		Preservation			1 0 m	
WAP-4s	5-3.22 1	145 G	ب		Custody	
WAP- 4I		230 1			Ŭ v v	
WAP-4D	1	320				
WAP-55	1	325				
WAP-5I		920				
WAP-SD		023				
WAP-65		350				
WAP-6I		206				*
						N
WAP-6D WARD CCR-AP-7		120				920 time
CORP CCR- AI- I		20				120 ///-0
Possible Hazard Identification			Sa	mple Disposal (A fee may be	assessed if samples are ret	ained longer than 1 month)
Non-Hazard Flammable Skin Irritant	Poison B Unknow	n Radiological		mple Disposal (A fee may be Return To Client		rchive For Months
Deliverable Requested: I, II, III, IV, Other (specify)			Spe	ecial Instructions/QC Requirem		
Empty Kit Relinquished by:	Da	te:	Time:		Method of Shipment:	
Relinquished by:	Date/Time: 5.3.22	600 cst com	pany AHAS	Received by	Date/Time:	9305 Company EETH
Relinquished by:	Date/Time:	Com	pany	Received by	Date/Time:	Company
Relinquished by:	Date/Time:	Com	pany	Received by:	Date/Time:	Company

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Eurofins Pittsburgh

301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Chain of Custody Record

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0	eurofins

Environment Testing America

Client Information Dient Contact: Mark Breting Company: Atlas Technical Consultants LLC			11/		es, Ken		_									
Company: Atlas Technical Consultants LLC	211-	Phone: E-Ma				es@et.eurofinsus.com		State of	State of Origin:		Page: 2 2 Page 8 of 6					
Atlas Technical Consultants LLC		1.2.	PWSID:	Item	T ayes	900	0.0			Deguests			Job#:			
ddress:	Due Date Request	ed:					1		Analysis	Requeste	u I	-	Preservation	Codes:		
7988 Centerpoint Drive Suite 100							И						A - HCL	M - Hexane		
ity: ndianapolis	TAT Requested (d	ays):											B - NaOH C - Zn Acetate D - Nitric Acid	N - None O - AsNaO2 P - Na2O4S		
tate, Zip: N, 46256	Compliance Project	ct: ∆ Yes	Δ Νο		1 88								E - NaHSO4	Q - Na2SO3		
hone: 64-214-8750(Tel)	PO #: FB-242026, AB	-241410]]]			F - MeOH G - Amchlor H - Ascorbic Ac	R - Na2S2O3 S - H2SO4 id T - TSP Dodecahydrate		
mail:	WO #:				ا ا		Ш	-					i - ice	U - Acetone		
nark.breting@atcassociates.com roject Name:	Project #:				r No)		Ш						J - DI Water K - EDTA	V - MCAA W - pH 4-5		
CR GW Monitoring FB Culley West	18016014				le (Ye:	1281	ш	228					K - EDTA L - EDA	- EDA Z - other (specify)		
CCR GW Monitoring FB Culley West lite:	SSOW#:				d	RGFN		- TDS		1 1 1						
		Sample	Sample Type (C=comp,	Matrix (w=water, S=solid, O=waste/oil,	Field Filtered St Perform MS/WS	9040C, 9066A_C	6020A, 7470A	2640C_Calcd - TDS 9315 Ra226, 9320 Ra228					Total Number of Specia			
Sample Identification	Sample Date	Time		BT=Tissue, A=Alr		_	7	7 D					Specia	I Instructions/Note:		
45-1 (CCZ-AP-7)	5.3.22	1920	G	w	\bigcap	1	ין ט	, D					920	tuin		
msD-1 (cce-AP-7)	3.5.20	110	1	1			Ħ							time		
ms2-2 (51)		920					Ħ									
msD-2 (51)		920											No.			
Dup-1		1														
DUP-Z							1	1								
FIELD Blank		1010	1	V		V	V	V								
														*		
					Ш			_						202		
					Щ			<u> </u>		ĻĻĻ						
Possible Hazard Identification Non-Hazard Flammable Skin Irritant			Destintes		San	_		osal (To Cli					ained longer tha Archive For	Months		
Non-Hazard Flammable Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify)	Poison B Unkr	own	Kadiologica		Spe				/QC Requ		l By Lab	1	Archive Por	Wionuis		
mpty Kit Relinquished by:		Date:			Time:					Me	thod of Shipm	ent:				
telinquished by:	Date/Time:	.22/16	DOCST	Company	45	Recei	ved by	W	2		Date/	14/27	_ 1115	Company		
Relinquished by:	Date/Time:			Company		Recei	ved by		X		Date/		11.0	Company		
Relinquished by:	Date/Time:			Company		Recei	ved by:	-			Date/	Time:		Company		

Client: Haley & Aldrich, Inc.

Job Number: 180-137587-1

Login Number: 137587 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)	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	

Client: Haley & Aldrich, Inc.

Job Number: 180-137587-1

Login Number: 137587 List Source: Eurofins St. Louis
List Number: 2 List Creation: 05/06/22 01:13 PM

Creator: Worthington, Sierra M

oreator. Worthington, Sierra W		
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.	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	
s 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	



Environment Testing America

ANALYTICAL REPORT

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-137625-1

Client Project/Site: CCR GW Monitoring FB Culley West

For:

Haley & Aldrich, Inc. 465 Medford St Suite 2200 Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Kuntll Hay

Authorized for release by: 6/8/2022 2:26:57 PM

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@et.eurofinsus.com





Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Job ID: 180-137625-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative 180-137625-1

Comments

No additional comments.

Receipt

The samples were received on 5/5/2022 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.1° C, 3.3° C and 3.7° C

GC Semi VOA

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

RAD

Methods 903.0, 9315: Radium-226 batch 564517

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-8S (180-137625-6), WAP-8I (180-137625-7), WAP-8D (180-137625-8), WAP-9S (180-137625-9), WAP-9I (180-137625-10), WAP-9D (180-137625-11), (LCS 160-564517/1-A), (LCSD 160-564517/2-A) and (MB 160-564517/12-A)

Method 9315: Radium-226 batch 564511

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-2R (180-137625-1), WAP-3S (180-137625-2), WAP-3D (180-137625-3), WAP-7S (180-137625-4), WAP-7D (180-137625-5), (LCS 160-564511/1-A), (MB 160-564511/24-A), (180-137587-A-5-B), (180-137587-A-5-C MS), (180-137587-A-5-D MSD), (180-137587-A-10-B MS) and (180-137587-A-10-C MSD)

Methods 904.0, 9320: Radium 228 batch 564520

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-8S (180-137625-6), WAP-8I (180-137625-7), WAP-8D (180-137625-8), WAP-9S (180-137625-9), WAP-9I (180-137625-10), WAP-9D (180-137625-11), (LCS 160-564520/1-A), (LCSD 160-564520/2-A) and (MB 160-564520/12-A)

Method 9320: Radium-228 batch 564514

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-2R (180-137625-1), WAP-3S (180-137625-2), WAP-3D (180-137625-3), WAP-7S (180-137625-4), WAP-7D (180-137625-5), (LCS 160-564514/1-A), (MB 160-564514/24-A), (180-137587-A-5-E), (180-137587-A-5-F MS) and (180-137587-A-5-G MSD)

Method PrecSep_0: Radium-228 Prep Batch 160-564520

The following sample was prepared at a reduced aliquot due to Matrix: WAP-9S (180-137625-9). A laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-564517

The following sample was prepared at a reduced aliquot due to Matrix: WAP-9S (180-137625-9). A laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Job ID: 180-137625-1

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Job ID: 180-137625-1 (Continued)

Laboratory: Eurofins Pittsburgh (Continued)

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

Metals

Method 6020A: The ICB recovered above the MDL for nickel but less than the RL ;therefore the data has been reported. (ICB 180-399007/6)

Method 6020A: The following samples were diluted due to the nature of the sample matrix: WAP-2R (180-137625-1), WAP-3S (180-137625-2) and WAP-3D (180-137625-3). Elevated reporting limits (RLs) are provided.

Method 6020A: The following sample was diluted to bring the concentration of target analytes within the calibration range: WAP-7S (180-137625-4). Elevated reporting limits (RLs) are provided.

Method 6020A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 180-399052 and analytical batch 180-399443 were outside control limits for barium copper and lithium. Sample matrix interference and/or non-homogeneit are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6020A: The serial dilution performed for the following sample associated with batch 180-399443 was outside control lim for multiple analytes: WAP-7D (180-137625-5) Multiple units being reported.

Method 6020A: The following samples were diluted to bring the concentration of target analytes within the calibration range: WAP-7D (180-137625-5), (180-137625-E-5-C MS ^10), (180-137625-E-5-D MSD ^10), (180-137625-E-5-B PDS ^10) and (180-137625-E-5-B SD ^50). 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.

General Chemistry

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

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Job ID: 180-137625-1

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

Qualifiers

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Qualifier Qualifier Description

MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not

applicable.

Metals

Qualifier Qualifier Description

MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not

applicable.

B 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

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

Rad

Qualifier Qualifier Description

U Result is less than the sample detection limit.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

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)

Method Quantitation Limit

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number

NC Not Calculated

MQL

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 GW Monitoring FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	05-29-22
California	State	2891	04-30-22 *
Connecticut	State	PH-0688	05-29-22
Florida	NELAP	E871008	05-29-22
Georgia	State	PA 02-00416	05-29-22
Illinois	NELAP	004375	05-29-22
Kansas	NELAP	E-10350	05-29-22
Kentucky (UST)	State	162013	04-30-22 *
Kentucky (WW)	State	KY98043	05-29-22
Louisiana	NELAP	04041	05-29-22
Maine	State	PA00164	03-06-24
Minnesota	NELAP	042-999-482	05-29-22
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	05-29-22
New Jersey	NELAP	PA005	05-29-22
New York	NELAP	11182	05-29-22
North Carolina (WW/SW)	State	434	05-29-22
North Dakota	State	R-227	04-30-22 *
Oregon	NELAP	PA-2151	02-07-23
Pennsylvania	NELAP	02-00416	05-29-22
Rhode Island	State	LAO00362	12-31-21 *
South Carolina	State	89014	05-29-22
Texas	NELAP	T104704528	05-29-22
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-22
Virginia	NELAP	10043	05-25-22
West Virginia DEP	State	142	05-29-22
Wisconsin	State	998027800	08-31-22

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 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	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	07-01-22
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22

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

Eurofins Pittsburgh

Job ID: 180-137625-1

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Laboratory: Eurofins St. Louis (Continued)

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

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

Job ID: 180-137625-1

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Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
Lab Sample ID	Client Sample ID	IVIALITA	Collected	Received
180-137625-1	WAP-2R	Water	05/04/22 13:42	05/05/22 10:00
180-137625-2	WAP-3S	Water	05/04/22 10:50	05/05/22 10:00
180-137625-3	WAP-3D	Water	05/04/22 11:30	05/05/22 10:00
180-137625-4	WAP-7S	Water	05/04/22 12:12	05/05/22 10:00
180-137625-5	WAP-7D	Water	05/04/22 12:47	05/05/22 10:00
180-137625-6	WAP-8S	Water	05/04/22 07:33	05/05/22 10:00
180-137625-7	WAP-8I	Water	05/04/22 08:29	05/05/22 10:00
180-137625-8	WAP-8D	Water	05/04/22 09:08	05/05/22 10:00
180-137625-9	WAP-9S	Water	05/04/22 09:10	05/05/22 10:00
180-137625-10	WAP-9I	Water	05/04/22 10:28	05/05/22 10:00
180-137625-11	WAP-9D	Water	05/04/22 11:50	05/05/22 10:00

Job ID: 180-137625-1

Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

/lethod	Method Description	Protocol	Laboratory
PA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
PA 6020A	Metals (ICP/MS)	SW846	TAL PIT
PA 7470A	Mercury (CVAA)	SW846	TAL PIT
PA 9040C	pH	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
315	Radium-226 (GFPC)	SW846	TAL SL
320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
470A	Preparation, Mercury	SW846	TAL PIT
recSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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.

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

Laboratory References:

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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

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Job ID: 180-137625-1

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137625-1

Client Sample ID: WAP-2R Date Collected: 05/04/22 13:42 Date Received: 05/05/22 10:00

Matrix: Water

Job ID: 180-137625-1

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 nt ID: CHIC2100A		1			399074	05/17/22 23:12	JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A nt ID: A		1	25 mL	25 mL	398676 399007	05/13/22 10:12 05/14/22 19:41		TAL PIT TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A nt ID: A		5	25 mL	25 mL	398676 399192	05/13/22 10:12 05/17/22 14:05		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	7470A EPA 7470A nt ID: HGY		1	50 mL	50 mL	399000 399123	05/17/22 04:57 05/17/22 15:15		TAL PIT TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C nt ID: PHTITRATOR		1			397958	05/06/22 12:01	HEK	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C nt ID: NOEQUIP		1	100 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep-21 9315 nt ID: GFPCRED		1	994.74 mL	1.0 g	564511 568823	05/09/22 09:56 06/07/22 18:13		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep_0 9320 nt ID: GFPCORANGE	Ξ	1	994.74 mL	1.0 g	564514 568850	05/09/22 10:57 06/07/22 12:03		TAL SL TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228		1			569036	06/08/22 12:54	SCB	TAL SL

Client Sample ID: WAP-3S Lab Sample ID: 180-137625-2 Date Collected: 05/04/22 10:50 **Matrix: Water**

Date Received: 05/05/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A at ID: CHIC2100A		1			399074	05/18/22 00:22	JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A It ID: A		1	25 mL	25 mL	398676 399007	05/13/22 10:12 05/14/22 19:56		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A It ID: A		2	25 mL	25 mL	398676 399192	05/13/22 10:12 05/17/22 14:09		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A tt ID: HGY		1	50 mL	50 mL	399000 399123	05/17/22 04:57 05/17/22 15:16		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			397958	05/06/22 11:50	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT

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Lab Sample ID: 180-137625-2 **Matrix: Water**

Client Sample ID: WAP-3S	
Date Collected: 05/04/22 10:50	
Date Received: 05/05/22 10:00	

	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			1004.44 mL	1.0 g	564511	05/09/22 09:56	MS	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCRED		1			568823	06/07/22 18:13	FLC	TAL SL
Total/NA	Prep	PrecSep_0			1004.44 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCORANGE	≣	1			568850	06/07/22 12:03	FLC	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 at ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Lab Sample ID: 180-137625-3 **Client Sample ID: WAP-3D**

Date Collected: 05/04/22 11:30 **Matrix: Water** Date Received: 05/05/22 10:00

D T	Batch	Batch	D	Dil	Initial	Final	Batch	Prepared	A I 4	
Prep Type Total/NA	Type Analysis Instrumer	Method EPA 9056A at ID: CHIC2100A	Run	Factor 1	Amount	Amount	Number 399074	or Analyzed 05/18/22 00:50	JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A at ID: A		1	25 mL	25 mL	398676 399007	05/13/22 10:12 05/14/22 20:10		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumer	3005A EPA 6020A at ID: A		2	25 mL	25 mL	398676 399192	05/13/22 10:12 05/17/22 14:12		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	7470A EPA 7470A nt ID: HGY		1	50 mL	50 mL	399000 399123	05/17/22 04:57 05/17/22 15:17		TAL PIT TAL PIT
Total/NA	Analysis Instrumer	EPA 9040C at ID: PHTITRATOR		1			397958	05/06/22 12:57	HEK	TAL PIT
Total/NA	Analysis Instrumer	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep-21 9315 at ID: GFPCRED		1	1004.11 mL	1.0 g	564511 568823	05/09/22 09:56 06/07/22 18:13		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumer	PrecSep_0 9320 at ID: GFPCORANGI	≣	1	1004.11 mL	1.0 g	564514 568850	05/09/22 10:57 06/07/22 12:03		TAL SL TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Lab Sample ID: 180-137625-4 **Client Sample ID: WAP-7S Matrix: Water**

Date Collected: 05/04/22 12:12 Date Received: 05/05/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A		1			399074	05/17/22 21:49	JRB	TAL PIT
	Instrumer	nt ID: CHIC2100A								

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137625-4

Matrix: Water

Job ID: 180-137625-1

Date Collected: 05/04/22 12:12 Date Received: 05/05/22 10:00

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 Recoverable	Prep	3005A			25 mL	25 mL	398676	05/13/22 10:12	KWP	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			399007	05/14/22 20:25	RSK	TAL PIT
	Instrumen	t ID: A								
Total Recoverable	Prep	3005A			25 mL	25 mL	398676	05/13/22 10:12	KWP	TAL PIT
Total Recoverable	Analysis	EPA 6020A		10			399192	05/17/22 14:16	RSK	TAL PIT
	Instrumen	t ID: A								
Total/NA	Prep	7470A			50 mL	50 mL	399000	05/17/22 04:57	RJR	TAL PIT
Total/NA	Analysis	EPA 7470A		1			399123	05/17/22 15:18	RJR	TAL PIT
	Instrumen	t ID: HGY								
Total/NA	Analysis	EPA 9040C		1			397958	05/06/22 13:00	HEK	TAL PIT
	Instrumen	t ID: PHTITRATOR								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT
	Instrumen	t ID: NOEQUIP								
Total/NA	Prep	PrecSep-21			997.57 mL	1.0 g	564511	05/09/22 09:56	MS	TAL SL
Total/NA	Analysis	9315		1			568823	06/07/22 18:13	FLC	TAL SL
	Instrumen	t ID: GFPCRED								
Total/NA	Prep	PrecSep_0			997.57 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis	9320		1			568850	06/07/22 12:04	FLC	TAL SL
	Instrumen	t ID: GFPCORANGI	E							
Total/NA	Analysis	Ra226_Ra228		1			569036	06/08/22 12:54	SCB	TAL SL
	Instrumen	t ID: NOEQUIP								

Client Sample ID: WAP-7D Lab Sample ID: 180-137625-5 Date Collected: 05/04/22 12:47 **Matrix: Water**

Date Received: 05/05/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A t ID: CHIC2100A		1	7		399074	05/17/22 22:17		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: NEMO		1	25 mL	25 mL	399052 399443	05/17/22 09:57 05/19/22 14:06		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: NEMO		10	25 mL	25 mL	399052 399556	05/17/22 09:57 05/20/22 12:06		TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGY		1	50 mL	50 mL	399000 399123	05/17/22 04:57 05/17/22 15:19		TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			397958	05/06/22 13:20	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	25 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCRED		1	1006.13 mL	1.0 g	564511 568823	05/09/22 09:56 06/07/22 18:13		TAL SL TAL SL

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-7D Lab Sample ID: 180-137625-5

Date Collected: 05/04/22 12:47 Date Received: 05/05/22 10:00

Matrix: Water

Matrix: Water

Job ID: 180-137625-1

	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			1006.13 mL	1.0 g	564514	05/09/22 10:57	MS	TAL SL
Total/NA	Analysis Instrumer	9320 at ID: GFPCORANC	βE	1			568850	06/07/22 12:04	FLC	TAL SL
Total/NA	Analysis Instrumer	Ra226_Ra228 at ID: NOEQUIP		1			569036	06/08/22 12:54	SCB	TAL SL

Lab Sample ID: 180-137625-6 **Client Sample ID: WAP-8S**

Date Collected: 05/04/22 07:33

Date Received: 05/05/22 10:00

_	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: CHIC2100A		1			399074	05/17/22 22:45	JRB	TAL PIT
Total Recoverable	Prep	3005A			25 mL	25 mL	399052	05/17/22 09:57	EMR	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: NEMO		1			399443	05/19/22 14:50	RSK	TAL PIT
Total Recoverable	Prep	3005A			25 mL	25 mL	399052	05/17/22 09:57	EMR	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A at ID: NEMO		1			399556	05/20/22 12:19	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	399000	05/17/22 04:57	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A at ID: HGY		1			399123	05/17/22 15:20	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C at ID: PHTITRATOR		1			397958	05/06/22 13:25	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C at ID: NOEQUIP		1	100 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT
Total/NA	Prep	PrecSep-21			995.80 mL	1.0 g	564517	05/09/22 11:07	MS	TAL SL
Total/NA	Analysis Instrumen	9315 at ID: GFPCRED		1			568823	06/07/22 08:20	FLC	TAL SL
Total/NA	Prep	PrecSep_0			995.80 mL	1.0 g	564520	05/09/22 11:20	MS	TAL SL
Total/NA	Analysis Instrumen	9320 at ID: GFPCORANGE	Ξ	1		-	568638	06/06/22 16:09	CLP	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 it ID: NOEQUIP		1			568864	06/07/22 15:48	SCB	TAL SL

Lab Sample ID: 180-137625-7 **Client Sample ID: WAP-8I** Date Collected: 05/04/22 08:29 **Matrix: Water**

Date Received: 05/05/22 10:00

Bat	Batch	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 nt ID: CHIC2100A		1			399074	05/18/22 01:18	JRB	TAL PIT
Total Recoverable	Prep	3005A			25 mL	25 mL	399052	05/17/22 09:57	EMR	TAL PIT
Total Recoverable	Analysis Instrumer	EPA 6020A nt ID: NEMO		1			399443	05/19/22 14:52	RSK	TAL PIT

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137625-7

Matrix: Water

Job ID: 180-137625-1

Client Sample ID: WAP-8I Date Collected: 05/04/22 08:29 Date Received: 05/05/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A	- IXUII	- 1 40101	25 mL	25 mL	399052	05/17/22 09:57	EMR	TAL PIT
Total Recoverable	Analysis	EPA 6020A t ID: NEMO		1			399556	05/20/22 12:21	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	399000	05/17/22 04:57	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			399123	05/17/22 15:21	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			397958	05/06/22 13:31	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT
Total/NA	Prep	PrecSep-21			1001.56 mL	1.0 g	564517	05/09/22 11:07	MS	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			568823	06/07/22 08:20	FLC	TAL SL
Total/NA	Prep	PrecSep 0			1001.56 mL	1.0 g	564520	05/09/22 11:20	MS	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCORANGE	≣	1		-	568638	06/06/22 16:09	CLP	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			568864	06/07/22 15:48	SCB	TAL SL

Client Sample ID: WAP-8D Lab Sample ID: 180-137625-8

Date Collected: 05/04/22 09:08 Matrix: Water Date Received: 05/05/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 9056A t ID: CHIC2100A		1			399074	05/18/22 01:32		TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: NEMO		1	25 mL	25 mL	399052 399443	05/17/22 09:57 05/19/22 15:00		TAL PIT TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: NEMO		1	25 mL	25 mL	399052 399556	05/17/22 09:57 05/20/22 12:32		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGY		1	50 mL	50 mL	399000 399123	05/17/22 04:57 05/17/22 15:22		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			397958	05/06/22 13:36	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCRED		1	992.82 mL	1.0 g	564517 568823	05/09/22 11:07 06/07/22 08:20		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCORANGE	Ξ	1	992.82 mL	1.0 g	564520 568638	05/09/22 11:20 06/06/22 16:09		TAL SL TAL SL

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6/8/2022

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Analysis

Client Sample ID: WAP-8D Lab Sample ID: 180-137625-8

Date Collected: 05/04/22 09:08
Date Received: 05/05/22 10:00

Ra226_Ra228

Matrix: Water

06/07/22 15:48 SCB

Job ID: 180-137625-1

TAL SL

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Method **Factor** or Analyzed Type Run **Amount Amount** Number Analyst Lab

Client Sample ID: WAP-9S

Date Collected: 05/04/22 09:10

Lab Sample ID: 180-137625-9

Matrix: Water

568864

Date Received: 05/05/22 10:00

Total/NA

	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			399074	05/18/22 01:46	JRB	TAL PIT
Total Recoverable	Prep	3005A			25 mL	25 mL	399052	05/17/22 09:57	EMR	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			399443	05/19/22 15:03	RSK	TAL PIT
Total Recoverable	Prep	3005A			25 mL	25 mL	399052	05/17/22 09:57	EMR	TAL PIT
Total Recoverable	Analysis Instrumen	EPA 6020A t ID: NEMO		1			399556	05/20/22 12:34	RSK	TAL PIT
Total/NA	Prep	7470A			50 mL	50 mL	399000	05/17/22 04:57	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			399123	05/17/22 15:23	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			397958	05/06/22 13:42	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT
Total/NA	Prep	PrecSep-21			751.15 mL	1.0 g	564517	05/09/22 11:07	MS	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			568823	06/07/22 08:20	FLC	TAL SL
Total/NA	Prep	PrecSep_0			751.15 mL	1.0 g	564520	05/09/22 11:20	MS	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCRED		1			568747	06/06/22 16:10	JCB	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			568864	06/07/22 15:48	SCB	TAL SL

Client Sample ID: WAP-9I

Date Collected: 05/04/22 10:28

Lab Sample ID: 180-137625-10

Matrix: Water

Date Received: 05/05/22 10:00

	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			399074	05/18/22 02:00	JRB	TAL PIT
	Instrumer	t ID: CHIC2100A								
Total Recoverable	Prep	3005A			25 mL	25 mL	399052	05/17/22 09:57	EMR	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			399443	05/19/22 15:05	RSK	TAL PIT
	Instrumer	t ID: NEMO								
Total Recoverable	Prep	3005A			25 mL	25 mL	399052	05/17/22 09:57	EMR	TAL PIT
Total Recoverable	Analysis	EPA 6020A		1			399556	05/20/22 12:37	RSK	TAL PIT
	Instrumer	t ID: NEMO								

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6/8/2022

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137625-10

Matrix: Water

Job ID: 180-137625-1

Date Collected: 05/04/22 10:28 Date Received: 05/05/22 10:00

Client Sample ID: WAP-9I

	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	399000	05/17/22 04:57	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 7470A t ID: HGY		1			399123	05/17/22 15:27	RJR	TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			397958	05/06/22 13:47	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT
Total/NA	Prep	PrecSep-21			993.76 mL	1.0 g	564517	05/09/22 11:07	MS	TAL SL
Total/NA	Analysis Instrumen	9315 t ID: GFPCRED		1			568823	06/07/22 08:21	FLC	TAL SL
Total/NA	Prep	PrecSep_0			993.76 mL	1.0 g	564520	05/09/22 11:20	MS	TAL SL
Total/NA	Analysis Instrumen	9320 t ID: GFPCRED		1		-	568747	06/06/22 16:10	JCB	TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			568864	06/07/22 15:48	SCB	TAL SL

Client Sample ID: WAP-9D Lab Sample ID: 180-137625-11

Date Collected: 05/04/22 11:50

Matrix: Water

Date Received: 05/05/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 9056A t ID: CHIC2100A		1			399074	05/18/22 02:42	JRB	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: NEMO		1	25 mL	25 mL	399052 399443	05/17/22 09:57 05/19/22 15:08		TAL PIT TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: NEMO		1	25 mL	25 mL	399052 399556	05/17/22 09:57 05/20/22 12:40		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGY		1	50 mL	50 mL	399000 399123	05/17/22 04:57 05/17/22 15:28		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			397958	05/06/22 13:53	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	398139	05/09/22 13:01	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCRED		1	994.72 mL	1.0 g	564517 568823	05/09/22 11:07 06/07/22 08:22		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCRED		1	994.72 mL	1.0 g	564520 568747	05/09/22 11:20 06/06/22 16:11		TAL SL TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			568864	06/07/22 15:48	SCB	TAL SL

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Laboratory References:

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058 TAL SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL PIT

Batch Type: Prep

EMR = Elizabeth Rarick

KWP = Kenneth Peters

RJR = Ron Rosenbaum

Batch Type: Analysis

HEK = Hope Kiesling

JCR = Jessica Rodgers

JRB = James Burzio

RJR = Ron Rosenbaum

RSK = Robert Kurtz

Lab: TAL SL

Batch Type: Prep

MS = Matthew Swaringam

Batch Type: Analysis

CLP = Cassandra Park

FLC = Fernando Cruz

JCB = Jacob Boyd

SCB = Sarah Bernsen

Job ID: 180-137625-1

Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-2R Lab Sample ID: 180-137625-1

Date Collected: 05/04/22 13:42 Matrix: Water

Date Received: 05/05/22 10:00

Method: EPA 9056A - Anic	ons, Ion Chroma	atography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	100		1.0	0.71	mg/L			05/17/22 23:12	1
Fluoride	0.40		0.10	0.026	mg/L			05/17/22 23:12	1
Sulfate	340		1.0	0.76	mg/L			05/17/22 23:12	1
- Method: EPA 6020A - Meta	als (ICP/MS) - To	otal Recov	erable						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	·	0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 19:41	1
Arsenic	0.0010		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 19:41	1
Barium	0.025		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 19:41	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 19:41	1
Boron	8.0		0.40	0.30	mg/L		05/13/22 10:12	05/17/22 14:05	5
Cadmium	0.00046	J	0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 19:41	1
Calcium	160		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 19:41	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 19:41	1
Cobalt	0.0022		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 19:41	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 19:41	1
Lithium	0.026		0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 19:41	1
Molybdenum	0.082		0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 19:41	1
Selenium	0.0024	J	0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 19:41	1
Thallium -	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 19:41	1
Method: EPA 7470A - Mer	cury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/17/22 04:57	05/17/22 15:15	1
- General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	870		10	10	mg/L			05/09/22 13:01	1
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
pH	7.4	HF	0.1	0.1	SU			05/06/22 12:01	1

Method: 9315 - I	Radium-226 (GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.176	U	0.207	0.207	1.00	0.333	pCi/L	05/09/22 09:56	06/07/22 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.5		40 - 110					05/09/22 09:56	06/07/22 18:13	1

Method: 9320 -	Radium-228 (GFPC)	Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.243	U	0.268	0.269	1.00	0.437	pCi/L	05/09/22 10:57	06/07/22 12:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.5		40 - 110					05/09/22 10:57	06/07/22 12:03	1
Y Carrier	91.6		40 - 110					05/09/22 10:57	06/07/22 12:03	1

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6/8/2022

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

Client Sample ID: WAP-2R

Date Collected: 05/04/22 13:42 Date Received: 05/05/22 10:00

Lab Sample ID: 180-137625-1

Matrix: Water

Method: Ra226_	Ra228 - Combined	Radium-226 an	d Radium-228
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			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.419	U	0.339	0.339	5.00	0.437	pCi/L		06/08/22 12:54	1

Client Sample ID: WAP-3S

Date Collected: 05/04/22 10:50 Date Received: 05/05/22 10:00

Lab Sample ID: 180-137625-2

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography Analyte Result Qualifier

RL**MDL** Unit Prepared Analyzed Dil Fac Chloride 0.71 mg/L 05/18/22 00:22 43 1.0 0.10 05/18/22 00:22 **Fluoride** 0.60 0.026 mg/L 1 **Sulfate** 1.0 0.76 mg/L 05/18/22 00:22 140

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

WELLIOU. EPA 6020A - I	netais (ICP/IVIS) - 10	olai Recovi	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 19:56	1
Arsenic	0.00031	J	0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 19:56	1
Barium	0.030		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 19:56	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 19:56	1
Boron	2.8		0.16	0.12	mg/L		05/13/22 10:12	05/17/22 14:09	2
Cadmium	ND		0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 19:56	1
Calcium	100		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 19:56	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 19:56	1
Cobalt	0.00069		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 19:56	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 19:56	1
Lithium	0.079		0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 19:56	1
Molybdenum	0.75		0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 19:56	1
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 19:56	1
Thallium	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 19:56	1

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Mercury	ND		0.00020	0.00013	ma/l		05/17/22 04:57	05/17/22 15:16	1	

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	440		10	10	mg/L			05/09/22 13:01	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
nH	7.7	HE	0.1	0.1	SU			05/06/22 11:50	1

Method: 9315 - R	adium-226 (GFPC)								
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.197	U	0.194	0.195	1.00	0.298	pCi/L	05/09/22 09:56	06/07/22 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.8		40 - 110					05/09/22 09:56	06/07/22 18:13	1

Eurofins Pittsburgh

Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-3S

Lab Sample ID: 180-137625-2

Date Collected: 05/04/22 10:50 **Matrix: Water** Date Received: 05/05/22 10:00

Method: 9320 - Radium-228 (GFPC)

		,00,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.442		0.300	0.303	1.00	0.442	pCi/L	05/09/22 10:57	06/07/22 12:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.8		40 - 110					05/09/22 10:57	06/07/22 12:03	1
Y Carrier	92.3		40 - 110					05/09/22 10:57	06/07/22 12:03	1

Method: 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 + 228	0.639		0.357	0.360	5.00	0.442	pCi/L		06/08/22 12:54	1

Client Sample ID: WAP-3D

Date Collected: 05/04/22 11:30

Date Received: 05/05/22 10:00

Method: EPA 9056A - Anions, Ion Chromatography

	•	0 1 2					
Analyte	Result	Qualifier RL	MDL	Unit	D Prep	ared Analyzed	Dil Fac
Chloride	45	1.0	0.71	mg/L		05/18/22 00:50	1
Fluoride	0.36	0.10	0.026	mg/L		05/18/22 00:50	1
Sulfate	180	1.0	0.76	mg/L		05/18/22 00:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 20:10	1
Arsenic	ND		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 20:10	1
Barium	0.012		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 20:10	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 20:10	1
Boron	3.4		0.16	0.12	mg/L		05/13/22 10:12	05/17/22 14:12	2
Cadmium	0.00022	J	0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 20:10	1
Calcium	110		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 20:10	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 20:10	1
Cobalt	0.00069		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 20:10	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 20:10	1
Lithium	0.079		0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 20:10	1
Molybdenum	0.43		0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 20:10	1
Selenium	ND		0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 20:10	1
Thallium	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 20:10	1

Method:	FPΔ 7470Δ.	 Mercury (CVAA 	11
Methou.	LFA / 4/ UM .	- Meiculv (CVA)	1 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/17/22 04:57	05/17/22 15:17	1

General	∣ Chemistry
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Analyte		Qualifier	RL _		Unit	<u>D</u> _	Prepared	Analyzed	Dil Fac
Total Dissolved Solids Analyte	530 Result	Qualifier	10 RL		mg/L Unit	D	Prepared	05/09/22 13:01 Analyzed	Dil Fac
pH		HF	0.1	0.1	SU	= -		05/06/22 12:57	1

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Lab Sample ID: 180-137625-3

Matrix: Water

6/8/2022

Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-3D

Date Collected: 05/04/22 11:30 Date Received: 05/05/22 10:00 Lab Sample ID: 180-137625-3

Matrix: Water

Method:	9315 -	Radium-226	(GFPC)

Ba Carrier	93.0	<u> </u>	40 - 110						06/07/22 18:13	1
Carrier	%Vield	Qualifier	Limits					Prepared	Analvzed	Dil Fac
Radium-226	0.149	U	0.169	0.170	1.00	0.271	pCi/L	05/09/22 09:56	06/07/22 18:13	1
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			Count	Total						

Mothod: 9320 - Padium-228 (CEDC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.112	U	0.252	0.252	1.00	0.443	pCi/L	05/09/22 10:57	06/07/22 12:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.0		40 - 110					05/09/22 10:57	06/07/22 12:03	1
Y Carrier	89.7		40 - 110					05/09/22 10:57	06/07/22 12:03	1

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

Mictilou. Mazzo_Ma		ibilica ita	alaili EEO a	ila itaalali						
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.261	U	0.303	0.304	5.00	0.443	pCi/L		06/08/22 12:54	1

Client Sample ID: WAP-7S

Lab Sample ID: 180-137625-4 Date Collected: 05/04/22 12:12 **Matrix: Water** Date Received: 05/05/22 10:00

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Analyte	Result Qu	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73	1.0	0.71	mg/L			05/17/22 21:49	1
Fluoride	0.11	0.10	0.026	mg/L			05/17/22 21:49	1
Sulfate	350	1.0	0.76	mg/L			05/17/22 21:49	1

Method: EPA 6020A - Metals	(ICP/MS)) - Total F	Recoverable
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0013	J	0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 20:25	1
Arsenic	0.0071		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 20:25	1
Barium	0.046		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 20:25	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 20:25	1
Boron	13		0.80	0.60	mg/L		05/13/22 10:12	05/17/22 14:16	10
Cadmium	ND		0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 20:25	1
Calcium	180		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 20:25	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 20:25	1
Cobalt	ND		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 20:25	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 20:25	1
Lithium	0.16		0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 20:25	1
Molybdenum	0.23		0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 20:25	1
Selenium	0.00074	J	0.0050	0.00074	mg/L		05/13/22 10:12	05/14/22 20:25	1
Thallium	ND		0.0010	0.00047	mg/L		05/13/22 10:12	05/14/22 20:25	1

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6/8/2022

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-7S Date Collected: 05/04/22 12:12 Lab Sample ID: 180-137625-4

Matrix: Water

Job ID: 180-137625-1

Date Received: 05/05/22 10:00

Method: EPA 7470A - Merc	ury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/17/22 04:57	05/17/22 15:18	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	850		10	10	mg/L			05/09/22 13:01	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	9.8	HF	0.1	0.1	SU			05/06/22 13:00	1

Method: 9315 - Ra	adium-226 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.168	U	0.200	0.200	1.00	0.325	pCi/L	05/09/22 09:56	06/07/22 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.6		40 - 110					05/09/22 09:56	06/07/22 18:13	1

Method: 9320 - R	adium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.391	U	0.328	0.330	1.00	0.510	pCi/L	05/09/22 10:57	06/07/22 12:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.6		40 - 110					05/09/22 10:57	06/07/22 12:04	1
Y Carrier	92.3		40 - 110					05/09/22 10:57	06/07/22 12:04	1

Method: Ra226_Ra	228 - Con	bined Rad	dium-226 a	nd Radiun	n-228					
_			Count	Total						
Analyte	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.559		0.384	0.386	5.00	0.510			06/08/22 12:54	1

Client Sample ID: WAP-7D

Date Collected: 05/04/22 12:47

Date Received: 05/05/22 10:00

Lab Sample ID: 180-137625-5

Matrix: Water

Method: EPA 9056A -	Anions, Ion Chromatograp	ohy						
Analyte	Result Qualifie	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150	1.0	0.71	mg/L			05/17/22 22:17	1
Fluoride	0.36	0.10	0.026	mg/L			05/17/22 22:17	1
Sulfate	890	1.0	0.76	mg/L			05/17/22 22:17	1

Method: EPA 6020A -	Metals (ICP/MS) - Total Recove	erable						
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.0020	0.00051	mg/L		05/17/22 09:57	05/19/22 14:06	1
Arsenic	0.0014	0.0010	0.00028	mg/L		05/17/22 09:57	05/19/22 14:06	1
Barium	0.036	0.010	0.0031	mg/L		05/17/22 09:57	05/19/22 14:06	1
Beryllium	ND	0.0010	0.00027	mg/L		05/17/22 09:57	05/19/22 14:06	1
Boron	12	0.80	0.60	mg/L		05/17/22 09:57	05/20/22 12:06	10
Cadmium	ND	0.0010	0.00022	mg/L		05/17/22 09:57	05/19/22 14:06	1

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Client Sample ID: WAP-7D Lab Sample ID: 180-137625-5 Date Collected: 05/04/22 12:47

Matrix: Water

Date Received: 05/05/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	370		0.50	0.13	mg/L		05/17/22 09:57	05/19/22 14:06	1
Chromium	ND		0.0020	0.0015	mg/L		05/17/22 09:57	05/19/22 14:06	1
Cobalt	0.0046		0.00050	0.00026	mg/L		05/17/22 09:57	05/19/22 14:06	1
Lead	ND		0.0010	0.00017	mg/L		05/17/22 09:57	05/19/22 14:06	1
Lithium	0.057		0.0050	0.00083	mg/L		05/17/22 09:57	05/19/22 14:06	1
Molybdenum	0.24		0.0050	0.00061	mg/L		05/17/22 09:57	05/19/22 14:06	1
Selenium	0.0032	J	0.0050	0.00074	mg/L		05/17/22 09:57	05/19/22 14:06	1
	ND		0.0040	0.00047	ma/l		05/17/22 09:57	05/19/22 14:06	4
Thallium : Method: EPA 7470A - Merc	ND urv (CVAA)		0.0010	0.00047	mg/L		05/17/22 09:57	05/19/22 14.00	'
Method: EPA 7470A - Merc Analyte	ury (CVAA) Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: EPA 7470A - Merc Analyte Mercury	ury (CVAA)	Qualifier			Unit	<u>D</u>			Dil Fac
Method: EPA 7470A - Merc Analyte Mercury	ury (CVAA) Result ND	Qualifier Qualifier	RL	MDL	Unit mg/L	<u>D</u>	Prepared	Analyzed	1
Method: EPA 7470A - Merc Analyte Mercury General Chemistry	ury (CVAA) Result ND	<u> </u>		MDL 0.00013	Unit mg/L	=	Prepared 05/17/22 04:57	Analyzed 05/17/22 15:19	1
Method: EPA 7470A - Merc Analyte Mercury General Chemistry Analyte	ury (CVAA) Result ND Result 3800	<u> </u>		MDL 0.00013 MDL 40	Unit mg/L Unit	=	Prepared 05/17/22 04:57	Analyzed 05/17/22 15:19 Analyzed	Dil Fac Dil Fac 1 Dil Fac

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.396	U	0.341	0.343	1.00	0.512	pCi/L	05/09/22 09:56	06/07/22 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	53.4		40 - 110					05/09/22 09:56	06/07/22 18:13	1

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analvzed	Dil Fac
Radium-228	0.540		0.493	0.495	1.00	0.780		05/09/22 10:57	06/07/22 12:04	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	53.4		40 - 110					05/09/22 10:57	06/07/22 12:04	1
Y Carrier	91.2		40 - 110					05/09/22 10:57	06/07/22 12:04	1

Method: Ra226_Ra	228 - Con	nbined Ra	dium-226 a	nd Radium	1-228					
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.936		0.599	0.602	5.00	0.780	pCi/L		06/08/22 12:54	1

Lab Sample ID: 180-137625-6 **Client Sample ID: WAP-8S Matrix: Water** Date Collected: 05/04/22 07:33 Date Received: 05/05/22 10:00

Method: EPA 9056A - Anions, Ion Chromatography										
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloride	56		1.0	0.71	mg/L			05/17/22 22:45	1

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Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

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Client Sample ID: WAP-8S Lab Sample ID: 180-137625-6

Date Collected: 05/04/22 07:33 Matrix: Water Date Received: 05/05/22 10:00

Method: EPA 9056A -	Anions, Ion Chroma	tography (Con	tinued	l)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.10		0.10	0.026	mg/L			05/17/22 22:45	1
Sulfate	200		1.0	0.76	mg/L			05/17/22 22:45	1
Mothod: EDA COOOA	Metale (ICD/MC) Te	tal Dagawayahi	ا ا ا						

Analyte	Result Qualifie	r RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND ND	0.0020	0.00051	mg/L		05/17/22 09:57	05/19/22 14:50	1
Arsenic	0.015	0.0010	0.00028	mg/L		05/17/22 09:57	05/19/22 14:50	1
Barium	0.17	0.010	0.0031	mg/L		05/17/22 09:57	05/19/22 14:50	1
Beryllium	ND	0.0010	0.00027	mg/L		05/17/22 09:57	05/19/22 14:50	1
Boron	2.1	0.080	0.060	mg/L		05/17/22 09:57	05/20/22 12:19	1
Cadmium	ND	0.0010	0.00022	mg/L		05/17/22 09:57	05/19/22 14:50	1
Calcium	130	0.50	0.13	mg/L		05/17/22 09:57	05/19/22 14:50	1
Chromium	ND	0.0020	0.0015	mg/L		05/17/22 09:57	05/19/22 14:50	1
Cobalt	0.00069	0.00050	0.00026	mg/L		05/17/22 09:57	05/19/22 14:50	1
Lead	ND	0.0010	0.00017	mg/L		05/17/22 09:57	05/19/22 14:50	1
Lithium	0.035	0.0050	0.00083	mg/L		05/17/22 09:57	05/19/22 14:50	1
Molybdenum	0.26	0.0050	0.00061	mg/L		05/17/22 09:57	05/19/22 14:50	1
Selenium	ND	0.0050	0.00074	mg/L		05/17/22 09:57	05/19/22 14:50	1
Thallium	ND	0.0010	0.00047	mg/L		05/17/22 09:57	05/19/22 14:50	1

Method: EPA 7470A - Merc	ury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/17/22 04:57	05/17/22 15:20	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	610		10	10	mg/L			05/09/22 13:01	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

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Method: 9315 - R		GFPC)								
	·	•	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.402		0.210	0.213	1.00	0.252	pCi/L	05/09/22 11:07	06/07/22 08:20	1
Carrier Ba Carrier	%Yield 91.5	Qualifier	Limits 40 - 110					Prepared 05/09/22 11:07	Analyzed 06/07/22 08:20	Dil Fac

Method: 9320 - F	Radium-228 (GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.695		0.339	0.345	1.00	0.461	pCi/L	05/09/22 11:20	06/06/22 16:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					05/09/22 11:20	06/06/22 16:09	1
Y Carrier	84.1		40 - 110					05/09/22 11:20	06/06/22 16:09	1

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05/06/22 13:25

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Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137625-6 **Client Sample ID: WAP-8S**

Date Collected: 05/04/22 07:33 **Matrix: Water** Date Received: 05/05/22 10:00

Method: 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 + 228	1.10		0.399	0.405	5.00	0.461	pCi/L		06/07/22 15:48	1

Client Sample ID: WAP-8I Lab Sample ID: 180-137625-7 **Matrix: Water**

Date Collected: 05/04/22 08:29 Date Received: 05/05/22 10:00

Client: Haley & Aldrich, Inc.

Method: EPA 9056A - Anions, Ion Chromatography								
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26	1.0	0.71	mg/L			05/18/22 01:18	1
Fluoride	0.25	0.10	0.026	mg/L			05/18/22 01:18	1
Sulfate	55	1.0	0.76	mg/L			05/18/22 01:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/17/22 09:57	05/19/22 14:52	1
Arsenic	0.010		0.0010	0.00028	mg/L		05/17/22 09:57	05/19/22 14:52	1
Barium	0.056		0.010	0.0031	mg/L		05/17/22 09:57	05/19/22 14:52	1
Beryllium	ND		0.0010	0.00027	mg/L		05/17/22 09:57	05/19/22 14:52	1
Boron	0.13		0.080	0.060	mg/L		05/17/22 09:57	05/20/22 12:21	1
Cadmium	ND		0.0010	0.00022	mg/L		05/17/22 09:57	05/19/22 14:52	1
Calcium	44		0.50	0.13	mg/L		05/17/22 09:57	05/19/22 14:52	1
Chromium	ND		0.0020	0.0015	mg/L		05/17/22 09:57	05/19/22 14:52	1
Cobalt	0.00041	J	0.00050	0.00026	mg/L		05/17/22 09:57	05/19/22 14:52	1
Lead	ND		0.0010	0.00017	mg/L		05/17/22 09:57	05/19/22 14:52	1
Lithium	0.0033	J	0.0050	0.00083	mg/L		05/17/22 09:57	05/19/22 14:52	1
Molybdenum	0.035		0.0050	0.00061	mg/L		05/17/22 09:57	05/19/22 14:52	1
Selenium	ND		0.0050	0.00074	mg/L		05/17/22 09:57	05/19/22 14:52	1
Thallium	ND		0.0010	0.00047	mg/L		05/17/22 09:57	05/19/22 14:52	1

Method: EPA 7470A - Mercury (CVAA)									
	Analyte	Result Qualifier	RL	MDL U	Jnit	D	Prepared	Analyzed	Dil Fac
	Mercury	ND	0.00020	0.00013 m	ng/L	_	05/17/22 04:57	05/17/22 15:21	1
	Г								

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	280		10	10	mg/L			05/09/22 13:01	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	8.0	HF	0.1	0.1	SU			05/06/22 13:31	1

	Radium-226 ((GFPC)								
` '		Count	Total							
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.354		0.201	0.204	1.00	0.245	pCi/L	05/09/22 11:07	06/07/22 08:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					05/09/22 11:07	06/07/22 08:20	1

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Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-8I Lab Sample ID: 180-137625-7

Date Collected: 05/04/22 08:29

Date Received: 05/05/22 10:00

Matrix: Water

Method: 9320 -	Radium-228 ((GFPC)								
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.229	U	0.288	0.289	1.00	0.479	pCi/L	05/09/22 11:20	06/06/22 16:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.0		40 - 110					05/09/22 11:20	06/06/22 16:09	1
Y Carrier	86.4		40 - 110					05/09/22 11:20	06/06/22 16:09	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.583		0.351	0.354	5.00	0.479	pCi/L		06/07/22 15:48	1

Client Sample ID: WAP-8D

Date Collected: 05/04/22 09:08

Date Received: 05/05/22 10:00

Lab Sample ID: 180-137625-8

Matrix: Water

Method: EPA 9056A - Anions, Ion Chromatography										
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	24	1.0	0.71	mg/L			05/18/22 01:32	1		
Fluoride	0.14	0.10	0.026	mg/L			05/18/22 01:32	1		
Sulfate	52	1.0	0.76	mg/L			05/18/22 01:32	1		

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/17/22 09:57	05/19/22 15:00	1
Arsenic	0.0031		0.0010	0.00028	mg/L		05/17/22 09:57	05/19/22 15:00	1
Barium	0.080		0.010	0.0031	mg/L		05/17/22 09:57	05/19/22 15:00	1
Beryllium	ND		0.0010	0.00027	mg/L		05/17/22 09:57	05/19/22 15:00	1
Boron	0.084		0.080	0.060	mg/L		05/17/22 09:57	05/20/22 12:32	1
Cadmium	ND		0.0010	0.00022	mg/L		05/17/22 09:57	05/19/22 15:00	1
Calcium	50		0.50	0.13	mg/L		05/17/22 09:57	05/19/22 15:00	1
Chromium	ND		0.0020	0.0015	mg/L		05/17/22 09:57	05/19/22 15:00	1
Cobalt	ND		0.00050	0.00026	mg/L		05/17/22 09:57	05/19/22 15:00	1
Lead	ND		0.0010	0.00017	mg/L		05/17/22 09:57	05/19/22 15:00	1
Lithium	0.0027	J	0.0050	0.00083	mg/L		05/17/22 09:57	05/19/22 15:00	1
Molybdenum	0.0015	J	0.0050	0.00061	mg/L		05/17/22 09:57	05/19/22 15:00	1
Selenium	ND		0.0050	0.00074	mg/L		05/17/22 09:57	05/19/22 15:00	1
Thallium	ND		0.0010	0.00047	mg/L		05/17/22 09:57	05/19/22 15:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/17/22 04:57	05/17/22 15:22	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	220		10	10	mg/L			05/09/22 13:01	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0	HE	0.1	0.1	SU			05/06/22 13:36	

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6/8/2022

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-8D

Date Collected: 05/04/22 09:08 Date Received: 05/05/22 10:00

Lab Sample ID: 180-137625-8

05/09/22 11:20 06/06/22 16:09

Matrix: Water

Job ID: 180-137625-1

Method: 9315 - Radium-226 (GFPC)

Analyte	Posult	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analvzed	Dil Fac
Analyte	Result	Qualifier	(20+/-)	(20+/-)	KL	MDC	Unit	Prepared	Analyzeu	Dii Fac
Radium-226	0.115	Ū	0.215	0.216	1.00	0.376	pCi/L	05/09/22 11:07	06/07/22 08:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.5		40 - 110					05/09/22 11:07	06/07/22 08:20	1

Method: 9320 - Radium-228 (GFPC) Count Total Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Analyzed Dil Fac Radium-228 0.396 U 0.290 0.292 0.438 pCi/L 05/09/22 11:20 06/06/22 16:09 1.00 Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 90.5 40 - 110 05/09/22 11:20 06/06/22 16:09

Method: Ra226 Ra228 - Combined Radium-226 and Radium-228 Total

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			Journe	. ota.						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.512		0.361	0.363	5.00	0.438	pCi/L		06/07/22 15:48	1

Lab Sample ID: 180-137625-9 **Client Sample ID: WAP-9S** Date Collected: 05/04/22 09:10 **Matrix: Water**

Date Received: 05/05/22 10:00

Y Carrier

Method: EPA 9056A - Anions, Ion Chromatography											
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	26		1.0	0.71	mg/L			05/18/22 01:46	1		
Fluoride	0.98		0.10	0.026	mg/L			05/18/22 01:46	1		
Sulfate	61		1.0	0.76	mg/L			05/18/22 01:46	1		

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/17/22 09:57	05/19/22 15:03	1
Arsenic	0.00079	J	0.0010	0.00028	mg/L		05/17/22 09:57	05/19/22 15:03	1
Barium	0.080		0.010	0.0031	mg/L		05/17/22 09:57	05/19/22 15:03	1
Beryllium	ND		0.0010	0.00027	mg/L		05/17/22 09:57	05/19/22 15:03	1
Boron	0.86		0.080	0.060	mg/L		05/17/22 09:57	05/20/22 12:34	1
Cadmium	ND		0.0010	0.00022	mg/L		05/17/22 09:57	05/19/22 15:03	1
Calcium	66		0.50	0.13	mg/L		05/17/22 09:57	05/19/22 15:03	1
Chromium	ND		0.0020	0.0015	mg/L		05/17/22 09:57	05/19/22 15:03	1
Cobalt	0.00060		0.00050	0.00026	mg/L		05/17/22 09:57	05/19/22 15:03	1
Lead	0.00029	JB	0.0010	0.00017	mg/L		05/17/22 09:57	05/19/22 15:03	1
Lithium	0.010		0.0050	0.00083	mg/L		05/17/22 09:57	05/19/22 15:03	1
Molybdenum	0.15		0.0050	0.00061	mg/L		05/17/22 09:57	05/19/22 15:03	1
Selenium	ND		0.0050	0.00074	mg/L		05/17/22 09:57	05/19/22 15:03	1
Thallium	ND		0.0010	0.00047	mg/L		05/17/22 09:57	05/19/22 15:03	1

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Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-9S

Date Received: 05/05/22 10:00

Lab Sample ID: 180-137625-9 Date Collected: 05/04/22 09:10

Matrix: Water

Method: EPA 7470A - Mercury (CVAA)

Analyte	Result	Qualifier F	L MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	0.000		mg/L		05/17/22 04:57	05/17/22 15:23	1

General Chemistry

Analyte Total Dissolved Solids	Result 310	Qualifier	RL 10		Unit mg/L	<u>D</u>	Prepared	Analyzed 05/09/22 13:01	Dil Fac
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0	HF	0.1	0.1	SU			05/06/22 13:42	1

Method: 9315 - Radium-226 (GFPC)

metriod: 5010 - Rac		, 5 ,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0300	U	0.188	0.188	1.00	0.391	pCi/L	05/09/22 11:07	06/07/22 08:20	1
Carrier Ba Carrier	%Yield 98.0	Qualifier	Limits 40 - 110					Prepared 05/09/22 11:07	Analyzed 06/07/22 08:20	Dil Fac

Method: 9320 - Radium-228 (GFPC)

Analyte	Rosult	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analvzed	Dil Fac
		Qualifier	0.347	0.351	1.00	0.510		05/09/22 11:20		1
Radium-228	0.515		0.347	0.331	1.00	0.510	pCI/L	05/09/22 11.20	00/00/22 10.10	ı
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.0		40 - 110					05/09/22 11:20	06/06/22 16:10	1
Y Carrier	86.7		40 - 110					05/09/22 11:20	06/06/22 16:10	1

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

			a.a 							
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226	0.485	U	0.395	0.398	5.00	0.510	pCi/L		06/07/22 15:48	1
+ 228										

Client Sample ID: WAP-9I Lab Sample ID: 180-137625-10 Date Collected: 05/04/22 10:28 **Matrix: Water** Date Received: 05/05/22 10:00

Wethod: EPA 9056A - Anio	ns, ion Unroma	itograpny							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		1.0	0.71	mg/L			05/18/22 02:00	1
Fluoride	0.14		0.10	0.026	mg/L			05/18/22 02:00	1
Sulfate	40		1.0	0.76	mg/L			05/18/22 02:00	1

Method: EPA 6020A - Metals (I	CP/NS) - 10	tai Recover	able						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/17/22 09:57	05/19/22 15:05	1
Arsenic	0.0053		0.0010	0.00028	mg/L		05/17/22 09:57	05/19/22 15:05	1
Barium	0.10		0.010	0.0031	mg/L		05/17/22 09:57	05/19/22 15:05	1
Beryllium	ND		0.0010	0.00027	mg/L		05/17/22 09:57	05/19/22 15:05	1
Boron	0.35		0.080	0.060	mg/L		05/17/22 09:57	05/20/22 12:37	1
Cadmium	ND		0.0010	0.00022	mg/L		05/17/22 09:57	05/19/22 15:05	1

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Client Sample ID: WAP-9I Lab

Lab Sample ID: 180-137625-10

Matrix: Water

Job ID: 180-137625-1

Date Collected: 05/04/22 10:28 Date Received: 05/05/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	48		0.50	0.13	mg/L		05/17/22 09:57	05/19/22 15:05	1
Chromium	ND		0.0020	0.0015	mg/L		05/17/22 09:57	05/19/22 15:05	1
Cobalt	0.00027	J	0.00050	0.00026	mg/L		05/17/22 09:57	05/19/22 15:05	1
Lead	ND		0.0010	0.00017	mg/L		05/17/22 09:57	05/19/22 15:05	1
Lithium	0.0042	J	0.0050	0.00083	mg/L		05/17/22 09:57	05/19/22 15:05	1
Molybdenum	0.018		0.0050	0.00061	mg/L		05/17/22 09:57	05/19/22 15:05	1
Selenium	ND		0.0050	0.00074	mg/L		05/17/22 09:57	05/19/22 15:05	1
Th III	ND		0.0010	0.00047	ma/L		05/17/22 09:57	05/19/22 15:05	1
Thallium	ND		0.0010	0.000			00/11/22 00101	00/ 10/22 10:00	-
- -			0.0010	0.000			00,11,22 00101	00, 10,22 10,00	
Method: EPA 7470A - Merc Analyte	cury (CVAA)	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
: Method: EPA 7470A - Merc	cury (CVAA)	Qualifier			Unit	<u>D</u>			Dil Fac
Method: EPA 7470A - Merc Analyte	cury (CVAA) Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: EPA 7470A - Merc Analyte Mercury	Cury (CVAA) Result ND	Qualifier Qualifier	RL	MDL 0.00013	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: EPA 7470A - Merc Analyte Mercury General Chemistry	Cury (CVAA) Result ND			MDL 0.00013	Unit mg/L		Prepared 05/17/22 04:57	Analyzed 05/17/22 15:27	1
Method: EPA 7470A - Merc Analyte Mercury General Chemistry Analyte	Result (240			MDL 0.00013 MDL 10	Unit mg/L		Prepared 05/17/22 04:57	Analyzed 05/17/22 15:27 Analyzed	1

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0958	U	0.152	0.153	1.00	0.266	pCi/L	05/09/22 11:07	06/07/22 08:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		40 - 110					05/09/22 11:07	06/07/22 08:21	1

			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.633		0.304	0.309	1.00	0.409	pCi/L	05/09/22 11:20	06/06/22 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		40 - 110					05/09/22 11:20	06/06/22 16:10	1
Y Carrier	93.5		40 - 110					05/09/22 11:20	06/06/22 16:10	1

Method: Ra226_Ra	228 - Con	nbined Rad	dium-226 a	nd Radium	-228					
_			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	0.729		0.340	0.345	5.00	0.409	pCi/L		06/07/22 15:48	1

Client Sample ID: WAP-9D

Date Collected: 05/04/22 11:50

Date Received: 05/05/22 10:00

Lab Sample ID: 180-137625-11

Matrix: Water

Method: EPA 9056A - Anions,	Ion Chromatography							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24	1.0	0.71	mg/L			05/18/22 02:42	1

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Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

Lab Sample ID: 180-137625-11 **Client Sample ID: WAP-9D**

Date Collected: 05/04/22 11:50 **Matrix: Water**

Date Received: 05/05/22 10:00

pН

Method: EPA 9056A - A	inions, Ion Chromato	graphy (Continue	d)					
Analyte	Result Q	ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.12	0.10	0.026	mg/L			05/18/22 02:42	1
Sulfate	40	1.0	0.76	mg/L			05/18/22 02:42	1
_ Method: EPA 6020A - N	Notale (ICD/MS) - Tota	l Pocovorablo						

Method: EPA 6020A - N	letals (ICP/MS) - To	tal Recove	erable						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/17/22 09:57	05/19/22 15:08	1
Arsenic	0.0069		0.0010	0.00028	mg/L		05/17/22 09:57	05/19/22 15:08	1
Barium	0.22		0.010	0.0031	mg/L		05/17/22 09:57	05/19/22 15:08	1
Beryllium	ND		0.0010	0.00027	mg/L		05/17/22 09:57	05/19/22 15:08	1
Boron	0.072	J	0.080	0.060	mg/L		05/17/22 09:57	05/20/22 12:40	1
Cadmium	ND		0.0010	0.00022	mg/L		05/17/22 09:57	05/19/22 15:08	1
Calcium	44		0.50	0.13	mg/L		05/17/22 09:57	05/19/22 15:08	1
Chromium	ND		0.0020	0.0015	mg/L		05/17/22 09:57	05/19/22 15:08	1
Cobalt	ND		0.00050	0.00026	mg/L		05/17/22 09:57	05/19/22 15:08	1
Lead	ND		0.0010	0.00017	mg/L		05/17/22 09:57	05/19/22 15:08	1
Lithium	0.0025	J	0.0050	0.00083	mg/L		05/17/22 09:57	05/19/22 15:08	1
Molybdenum	0.0027	J	0.0050	0.00061	mg/L		05/17/22 09:57	05/19/22 15:08	1
Selenium	ND		0.0050	0.00074	mg/L		05/17/22 09:57	05/19/22 15:08	1
Thallium	ND		0.0010	0.00047	mg/L		05/17/22 09:57	05/19/22 15:08	1

Method: EPA 7470A - Merci	ury (CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		05/17/22 04:57	05/17/22 15:28	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	210		10	10	mg/L			05/09/22 13:01	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

0.1

7.9 HF

0.1 SU

05/06/22 13:53

Method: 9315 - Ra	dium-226 (GFPC)	•							
			Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.209	U	0.164	0.166	1.00	0.233	pCi/L	05/09/22 11:07	06/07/22 08:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					05/09/22 11:07	06/07/22 08:22	1

Method: 9320 - F		,	Count Uncert.	Total Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.705		0.331	0.337	1.00	0.447	pCi/L	05/09/22 11:20	06/06/22 16:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		40 - 110					05/09/22 11:20	06/06/22 16:11	1
Y Carrier	90.1		40 - 110					05/09/22 11:20	06/06/22 16:11	1

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Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

0.914

Client Sample ID: WAP-9D Lab Sample ID: 180-137625-11

Date Collected: 05/04/22 11:50 Matrix: Water Date Received: 05/05/22 10:00

Method: Ra22	26_Ra228 - Combined Rad	ium-226 a	nd Radium-	-228				
		Count	Total					
		Uncert.	Uncert.					
Analyte	Result Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC Unit	Prepared	Analyzed	Dil Fac

5.00

0.447 pCi/L

0.376

0.369

Combined Radium 226 + 228

06/07/22 15:48

9

10

12

Project/Site: CCR GW Monitoring FB Culley West

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-399074/7

Matrix: Water

Analysis Batch: 399074

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

Job ID: 180-137625-1

MB MB Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Chloride ND 1.0 0.71 mg/L 05/17/22 18:02 Fluoride ND 0.10 0.026 mg/L 05/17/22 18:02 Sulfate ND 1.0 0.76 mg/L 05/17/22 18:02

Lab Sample ID: LCS 180-399074/5

Matrix: Water

Analysis Batch: 399074

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

Client Sample ID: WAP-2R

Client Sample ID: WAP-2R

Prep Type: Total/NA

Prep Type: Total/NA

-	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	2.52		mg/L		101	80 - 120	
Sulfate	50.0	50.5		mg/L		101	80 - 120	

Lab Sample ID: 180-137625-1 MS

Matrix: Water

Analysis Batch: 399074

rmanyolo Zatom cocci i	Sample	Sample	Spike	MS	MS				%Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Chloride	100		50.0	154		mg/L		102	80 - 120
Fluoride	0.40		2.50	2.89		mg/L		100	80 - 120
Sulfate	340		50.0	382	4	ma/L		81	80 - 120

Lab Sample ID: 180-137625-1 MSD

Matrix: Water

Analysis Batch: 399074	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	100		50.0	143		mg/L		80	80 - 120	7	15
Fluoride	0.40		2.50	2.69		mg/L		91	80 - 120	7	15
Sulfate	340		50.0	355	4	mg/L		27	80 - 120	7	15

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

Lab Sample ID: MB 180-398676/1-A

Matrix: Water

Analysis Batch: 399007

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 398676

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/13/22 10:12	05/14/22 17:30	1
Arsenic	ND		0.0010	0.00028	mg/L		05/13/22 10:12	05/14/22 17:30	1
Barium	ND		0.010	0.0031	mg/L		05/13/22 10:12	05/14/22 17:30	1
Beryllium	ND		0.0010	0.00027	mg/L		05/13/22 10:12	05/14/22 17:30	1
Boron	ND		0.080	0.060	mg/L		05/13/22 10:12	05/14/22 17:30	1
Cadmium	ND		0.0010	0.00022	mg/L		05/13/22 10:12	05/14/22 17:30	1
Calcium	ND		0.50	0.13	mg/L		05/13/22 10:12	05/14/22 17:30	1
Chromium	ND		0.0020	0.0015	mg/L		05/13/22 10:12	05/14/22 17:30	1
Cobalt	ND		0.00050	0.00026	mg/L		05/13/22 10:12	05/14/22 17:30	1
Lead	ND		0.0010	0.00017	mg/L		05/13/22 10:12	05/14/22 17:30	1
Lithium	ND		0.0050	0.00083	mg/L		05/13/22 10:12	05/14/22 17:30	1
Molybdenum	ND		0.0050	0.00061	mg/L		05/13/22 10:12	05/14/22 17:30	1

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Project/Site: CCR GW Monitoring FB Culley West

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

Lab Sample ID: MB 180-398676/1-A

Matrix: Water

Analyte

Selenium

Thallium

Analyte

Boron

Analysis Batch: 399007

Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 398676

MB MB Result Qualifier **MDL** Unit Prepared Analyzed Dil Fac ND 0.0050 0.00074 mg/L 05/13/22 10:12 05/14/22 17:30

0.00047 mg/L

Lab Sample ID: MB 180-398676/1-A

Matrix: Water

Analysis Batch: 399192

ND

MB MB Analyzed Result Qualifier RL MDL Unit Prepared Dil Fac 05/13/22 10:12 05/17/22 12:23 ND 0.080 0.060 mg/L

Lab Sample ID: LCS 180-398676/2-A

Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total Recoverable Analysis Batch: 399007 **Prep Batch: 398676**

0.0010

Spike	LCS	LCS				%Rec
Added	Result	Qualifier	Unit	D	%Rec	Limits
0.250	0.258		mg/L		103	80 - 120
1.00	0.965		mg/L		97	80 - 120
1.00	0.928		mg/L		93	80 - 120
0.500	0.477		mg/L		95	80 - 120
0.500	0.480		mg/L		96	80 - 120
25.0	25.3		mg/L		101	80 - 120
0.500	0.466		mg/L		93	80 - 120
0.500	0.457		mg/L		91	80 - 120
0.500	0.479		mg/L		96	80 - 120
0.500	0.439		mg/L		88	80 - 120
0.500	0.482		mg/L		96	80 - 120
1.00	0.924		mg/L		92	80 - 120
1.00	0.957		mg/L		96	80 - 120
	Added 0.250 1.00 1.00 0.500 0.500 25.0 0.500 0.500 0.500 0.500 0.500 1.00	Added Result 0.250 0.258 1.00 0.965 1.00 0.928 0.500 0.477 0.500 0.480 25.0 25.3 0.500 0.466 0.500 0.457 0.500 0.479 0.500 0.482 1.00 0.924	Added Result Qualifier 0.250 0.258 Qualifier 1.00 0.965 Qualifier 1.00 0.928 Qualifier 0.500 0.928 Qualifier 0.500 0.477 Qualifier 0.500 0.480 Qualifier 0.500 0.480 Qualifier 0.500 0.480 Qualifier 0.500 0.466 Qualifier 0.500 0.457 Qualifier 0.500 0.479 Qualifier 0.500 0.482 Qualifier 0.500 0.482 Qualifier 0.500 0.924 Qualifier	Added Result Qualifier Unit 0.250 0.258 mg/L 1.00 0.965 mg/L 1.00 0.928 mg/L 0.500 0.477 mg/L 0.500 0.480 mg/L 25.0 25.3 mg/L 0.500 0.466 mg/L 0.500 0.457 mg/L 0.500 0.479 mg/L 0.500 0.439 mg/L 0.500 0.482 mg/L 1.00 0.924 mg/L	Added Result Qualifier Unit D 0.250 0.258 mg/L 1.00 0.965 mg/L 1.00 0.928 mg/L 0.500 0.477 mg/L 0.500 0.480 mg/L 25.0 25.3 mg/L 0.500 0.466 mg/L 0.500 0.457 mg/L 0.500 0.479 mg/L 0.500 0.439 mg/L 0.500 0.482 mg/L 1.00 0.924 mg/L	Added Result Qualifier Unit D %Rec 0.250 0.258 mg/L 103 1.00 0.965 mg/L 97 1.00 0.928 mg/L 93 0.500 0.477 mg/L 95 0.500 0.480 mg/L 96 25.0 25.3 mg/L 101 0.500 0.466 mg/L 93 0.500 0.457 mg/L 91 0.500 0.479 mg/L 96 0.500 0.439 mg/L 88 0.500 0.482 mg/L 96 1.00 0.924 mg/L 92

Lab Sample ID: LCS 180-398676/2-A

Matrix: Water

Analysis Batch: 399192							Prep Ba	tch: 398676
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Boron	1.25	1.11		mg/L		89	80 - 120	

Lab Sample ID: MB 180-399052/1-A **Client Sample ID: Method Blank Matrix: Water Prep Type: Total Recoverable** Analysis Batch: 399443 **Prep Batch: 399052**

	MB	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/17/22 09:57	05/19/22 15:44	1
Arsenic	ND		0.0010	0.00028	mg/L		05/17/22 09:57	05/19/22 15:44	1
Barium	ND		0.010	0.0031	mg/L		05/17/22 09:57	05/19/22 15:44	1
Beryllium	ND		0.0010	0.00027	mg/L		05/17/22 09:57	05/19/22 15:44	1
Cadmium	ND		0.0010	0.00022	mg/L		05/17/22 09:57	05/19/22 15:44	1
Calcium	ND		0.50	0.13	mg/L		05/17/22 09:57	05/19/22 15:44	1
Chromium	ND		0.0020	0.0015	mg/L		05/17/22 09:57	05/19/22 15:44	1
Cobalt	ND		0.00050	0.00026	mg/L		05/17/22 09:57	05/19/22 15:44	1
Lead	0.000288	J	0.0010	0.00017	mg/L		05/17/22 09:57	05/19/22 15:44	1
Lead	0.000288	J	0.0010	0.00017	mg/L		05/17/22 09:57	05/19/22 15:44	1

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Job ID: 180-137625-1

05/13/22 10:12 05/14/22 17:30

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 398676

Project/Site: CCR GW Monitoring FB Culley West

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

Lab Sample ID: MB 180-399052/1-A

Matrix: Water

Analysis Batch: 399443

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

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 399052

Prep Batch: 399052

Job ID: 180-137625-1

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		0.0050	0.00083	mg/L		05/17/22 09:57	05/19/22 15:44	1
Molybdenum	ND		0.0050	0.00061	mg/L		05/17/22 09:57	05/19/22 15:44	1
Selenium	ND		0.0050	0.00074	mg/L		05/17/22 09:57	05/19/22 15:44	1
Thallium	ND		0.0010	0.00047	mg/L		05/17/22 09:57	05/19/22 15:44	1

Lab Sample ID: MB 180-399052/1-A

Lab Sample ID: LCS 180-399052/2-A

Matrix: Water

Matrix: Water

Analysis Batch: 399556

MB MB

Analyte Result Qualifier RL **MDL** Unit Analyzed Dil Fac D Prepared Boron ND 0.080 0.060 mg/L 05/17/22 09:57 05/20/22 12:24

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

Prep Batch: 399052

Analysis Batch: 399443 Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Antimony 0.250 0.243 mg/L 97 80 - 120 1.00 80 - 120 Arsenic 0.896 mg/L 90 Barium 1.00 0.945 mg/L 95 80 - 120 Beryllium 0.500 0.486 97 80 - 120 mg/L 0.481 Cadmium 0.500 mg/L 96 80 - 120 Calcium 25.0 26.8 mg/L 107 80 - 120 Chromium 0.500 0.468 80 - 120 mg/L 94 Cobalt 0.500 0.453 mg/L 91 80 - 120 Lead 0.500 0.482 mg/L 96 80 - 120 Lithium 0.500 0.461 92 80 - 120 mg/L Molybdenum 0.500 0.489 mg/L 98 80 - 120Selenium 1.00 0.941 94 80 - 120 mg/L Thallium 1.00 0.956 mg/L 80 - 120

Lab Sample ID: LCS 180-399052/2-A **Client Sample ID: Lab Control Sample Matrix: Water Prep Type: Total Recoverable** Analysis Batch: 399556 **Prep Batch: 399052** LCS LCS Spike %Rec Added **Analyte** Result Qualifier Unit %Rec Limits Boron 1.25 1.34 mg/L 80 - 120

Lab Sample ID: 180-137625-5 MS Client Sample ID: WAP-7D **Matrix: Water Prep Type: Total Recoverable**

Analysis Batch: 399443 Prep Batch: 399052

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Antimony	ND		0.250	0.243		mg/L		97	75 - 125	
Arsenic	0.0014		1.00	0.916		mg/L		91	75 - 125	
Barium	0.036		1.00	0.956		mg/L		92	75 - 125	
Beryllium	ND		0.500	0.462		mg/L		92	75 - 125	
Cadmium	ND		0.500	0.461		mg/L		92	75 - 125	
Calcium	370		25.0	386	4	mg/L		84	75 - 125	
Chromium	ND		0.500	0.449		mg/L		90	75 - 125	

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Project/Site: CCR GW Monitoring FB Culley West

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

Matrix: Water

Analysis Batch: 399443

Lab Sample ID: 180-137625-5 MS Client Sample ID: WAP-7D **Prep Type: Total Recoverable Prep Batch: 399052**

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Cobalt	0.0046		0.500	0.449		mg/L		89	75 - 125	
Lead	ND		0.500	0.476		mg/L		95	75 - 125	
Lithium	0.057		0.500	0.505		mg/L		90	75 - 125	
Molybdenum	0.24		0.500	0.717		mg/L		96	75 - 125	
Selenium	0.0032	J	1.00	0.890		mg/L		89	75 - 125	
Thallium	ND		1.00	0.958		mg/L		96	75 - 125	

Lab Sample ID: 180-137625-5 MS

Matrix: Water

Analysis Batch: 399556 MS MS Sample Sample Spike

%Rec Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits Boron 12 1.25 13.8 4 mg/L 120 75 - 125

Lab Sample ID: 180-137625-5 MSD

Matrix: Water

Analysis Batch: 399443

Client Sample ID: WAP-7D Prep Type: Total Recoverable

Prep Batch: 399052

Client Sample ID: WAP-7D

Prep Batch: 399052

Prep Type: Total Recoverable

Alialysis Dalcii. 333443									Fieh De	ilcii. S	75052
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND		0.250	0.251		mg/L		100	75 - 125	3	20
Arsenic	0.0014		1.00	0.982		mg/L		98	75 - 125	7	20
Barium	0.036		1.00	1.00		mg/L		97	75 - 125	5	20
Beryllium	ND		0.500	0.469		mg/L		94	75 - 125	1	20
Cadmium	ND		0.500	0.471		mg/L		94	75 - 125	2	20
Calcium	370		25.0	396	4	mg/L		121	75 - 125	2	20
Chromium	ND		0.500	0.466		mg/L		93	75 - 125	4	20
Cobalt	0.0046		0.500	0.474		mg/L		94	75 - 125	5	20
Lead	ND		0.500	0.487		mg/L		97	75 - 125	2	20
Lithium	0.057		0.500	0.511		mg/L		91	75 - 125	1	20
Molybdenum	0.24		0.500	0.735		mg/L		100	75 - 125	2	20
Selenium	0.0032	J	1.00	0.922		mg/L		92	75 - 125	4	20
Thallium	ND		1.00	0.979		mg/L		98	75 - 125	2	20

Lab Sample ID: 180-137625-5 MSD

Matrix: Water Prep Type: Total Recoverable Analysis Batch: 399556 Prep Batch: 399052

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	12		1.25	13.8	4	mg/L		118	75 - 125	0	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-399000/1-A

Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA **Analysis Batch: 399123 Prep Batch: 399000**

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Mercury ND 0.00020 0.00013 mg/L 05/17/22 04:57 05/17/22 15:00

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Job ID: 180-137625-1

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Client Sample ID: WAP-7D

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

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

Lab Sample ID: LCS 180-399000/2-A Client Sample ID: Lab Control Sample Prep Type: Total/NA

Matrix: Water

Prep Batch: 399000 Analysis Batch: 399123

Spike LCS LCS %Rec Result Qualifier Added Limits Analyte Unit %Rec Mercury 0.00250 0.00253 mg/L 101 80 - 120

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-397958/26 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 397958

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

Lab Sample ID: LCS 180-397958/3 **Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 397958

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

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

Lab Sample ID: MB 180-398139/2 Client Sample ID: Method Blank **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 398139

MB MB RL **MDL** Unit Analyte Result Qualifier Dil Fac Prepared Analyzed 10 Total Dissolved Solids 05/09/22 13:01 ND 10 mg/L

Lab Sample ID: LCS 180-398139/1 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 398139

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits **Total Dissolved Solids** 251 240 mg/L 96 85 - 115

Lab Sample ID: 180-137625-1 DU Client Sample ID: WAP-2R Prep Type: Total/NA

Matrix: Water

Analysis Batch: 398139

DU DU RPD Sample Sample Result Qualifier Result Qualifier Unit RPD Limit Total Dissolved Solids 870 878 mg/L

Client Sample ID: WAP-9D Lab Sample ID: 180-137625-11 DU **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 398139

DU DU **RPD** Sample Sample Result Qualifier Result Qualifier Unit Limit Total Dissolved Solids 210 201 mg/L

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Client: Haley & Aldrich, Inc.

Analysis Batch: 568823

Matrix: Water

Matrix: Water

Analysis Batch: 569008

Project/Site: CCR GW Monitoring FB Culley West

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-564511/24-A

Lab Sample ID: LCS 160-564511/1-A

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 564511

			Count	Total						
	MB	MB	Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1833	U	0.211	0.212	1.00	0.343	pCi/L	05/09/22 10:23	06/07/22 18:13	1

MB MB

Carrier **%Yield Qualifier** Limits Prepared Analyzed Dil Fac 05/09/22 10:23 06/07/22 18:13 Ba Carrier 87.8 40 - 110

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 564511

Total LCS LCS %Rec **Spike** Uncert. Analyte Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits Radium-226 11.3 9.113 1.24 1.00 0.405 pCi/L 80 75 - 125

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 94.8 40 - 110

Lab Sample ID: MB 160-564517/12-A **Client Sample ID: Method Blank Matrix: Water** Prep Type: Total/NA

Analysis Batch: 568823

MR MR

Prep Batch: 564517 Count Total Uncert. MB MB Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ **MDC** Unit Dil Fac RL Prepared Analyzed Radium-226 Ū 1.00 05/09/22 11:07 06/07/22 08:22 0.2084 0.169 0.170 0.242 pCi/L

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac 05/09/22 11:07 06/07/22 08:22 Ba Carrier 86.3 40 - 110

Total

Lab Sample ID: LCS 160-564517/1-A

Matrix: Water

Analysis Batch: 568835

Client Sample ID: Lab Control Sample

Prep Type: Total/NA **Prep Batch: 564517**

Spike LCS LCS Uncert. %Rec Analyte Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits Radium-226 11.3 9.367 1.21 1.00 0.343 pCi/L 83 75 - 125

LCS LCS Carrier %Yield Qualifier Limits Ba Carrier 85.8 40 - 110

Lab Sample ID: LCSD 160-564517/2-A **Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA

Matrix: Water

Analysis Batch: 568835

Total **Spike** LCSD LCSD Uncert. %Rec **RER** Analyte Added Result Qual $(2\sigma + / -)$ RL **MDC** Unit %Rec Limits RER Limit Radium-226 11.3 10.48 1.38 1.00 0.390 pCi/L 75 - 125 0.43

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Prep Batch: 564517

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCSD 160-564517/2-A

Matrix: Water

Analysis Batch: 568835

LCSD LCSD

Carrier **%Yield Qualifier** Limits Ba Carrier 688 40 - 110 **Client Sample ID: Lab Control Sample Dup**

Prep Type: Total/NA

Prep Batch: 564517

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-564514/24-A Client Sample ID: Method Blank

Matrix: Water

Analysis Batch: 568850

Prep Type: Total/NA

Prep Batch: 564514

MB MB Uncert. Uncert. **MDC** Unit **Analyte** Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL Prepared Analyzed Dil Fac Radium-228 pCi/L 05/09/22 10:57 06/07/22 12:04 0.02418 0.253 0.253 1.00 0.471

Total

Count

MΒ MB

Carrier %Yield Qualifier Limits Prepared Dil Fac Analyzed 05/09/22 10:57 40 - 110 06/07/22 12:04 Ba Carrier 87.8 40 - 110 Y Carrier 91.6 05/09/22 10:57 06/07/22 12:04

Lab Sample ID: LCS 160-564514/1-A

Matrix: Water

Analysis Batch: 568835

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 564514

Total

Spike LCS LCS Uncert. %Rec Analyte Added **MDC** Unit Result Qual $(2\sigma + / -)$ RL %Rec Limits Radium-228 8.55 9.254 1.24 1.00 0.525 pCi/L 108 75 - 125

LCS LCS

Carrier **%Yield Qualifier** Limits Ba Carrier 94 8 40 - 110 Y Carrier 84.1 40 - 110

Lab Sample ID: MB 160-564520/12-A Client Sample ID: Method Blank

Matrix: Water

Analysis Batch: 568747

Prep Type: Total/NA

Prep Batch: 564520

Count Total MB MB Uncert. Uncert. **MDC** Unit Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL Prepared Analyzed Dil Fac Radium-228 0.359 0.367 1.00 0.487 pCi/L 05/09/22 11:20 06/06/22 16:11 0.7881

> MR MB

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac 40 - 110 Ba Carrier 86.3 05/09/22 11:20 06/06/22 16:11 40 - 110 05/09/22 11:20 06/06/22 16:11 Y Carrier 92.0

Lab Sample ID: LCS 160-564520/1-A

Matrix: Water

Analysis Batch: 568638

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 564520

Total %Rec LCS LCS Spike Uncert. Analyte Added Result Qual $(2\sigma + / -)$ RL MDC Unit %Rec Limits Radium-228 8.56 9.268 1.24 1.00 0.446 pCi/L 108 75 - 125

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QC Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

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

Lab Sample ID: LCS 160-564520/1-A

Matrix: Water

Analysis Batch: 568638

LCS LCS

Carrier	%Yield	Qualifier	Limits
Ba Carrier	85.8		40 - 110
Y Carrier	84.1		40 - 110

Lab Sample ID: LCSD 160-564520/2-A

Matrix: Water

Analysis Batch: 568638

Total Spike LCSD LCSD Uncert. %Rec **RER** Analyte Added Result Qual $(2\sigma + / -)$ RL**MDC** Unit %Rec Limits RER Limit Radium-228 8.56 9.968 1.39 1.00 0.535 pCi/L 116 75 - 125 0.27

LCSD LCSD Carrier %Yield Qualifier Limits Ba Carrier 68.8 40 - 110 40 - 110 Y Carrier 86.4

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

Prep Batch: 564520

Prep Type: Total/NA

Prep Batch: 564520

Client Sample ID: Lab Control Sample Dup

Client: Haley & Aldrich, Inc.

Job ID: 180-137625-1 Project/Site: CCR GW Monitoring FB Culley West

HPLC/IC

Analysis Batch: 399074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-1	WAP-2R	Total/NA	Water	EPA 9056A	
180-137625-2	WAP-3S	Total/NA	Water	EPA 9056A	
180-137625-3	WAP-3D	Total/NA	Water	EPA 9056A	
180-137625-4	WAP-7S	Total/NA	Water	EPA 9056A	
180-137625-5	WAP-7D	Total/NA	Water	EPA 9056A	
180-137625-6	WAP-8S	Total/NA	Water	EPA 9056A	
180-137625-7	WAP-8I	Total/NA	Water	EPA 9056A	
180-137625-8	WAP-8D	Total/NA	Water	EPA 9056A	
180-137625-9	WAP-9S	Total/NA	Water	EPA 9056A	
180-137625-10	WAP-9I	Total/NA	Water	EPA 9056A	
180-137625-11	WAP-9D	Total/NA	Water	EPA 9056A	
MB 180-399074/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-399074/5	Lab Control Sample	Total/NA	Water	EPA 9056A	
180-137625-1 MS	WAP-2R	Total/NA	Water	EPA 9056A	
180-137625-1 MSD	WAP-2R	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 398676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-1	WAP-2R	Total Recoverable	Water	3005A	
180-137625-2	WAP-3S	Total Recoverable	Water	3005A	
180-137625-3	WAP-3D	Total Recoverable	Water	3005A	
180-137625-4	WAP-7S	Total Recoverable	Water	3005A	
MB 180-398676/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-398676/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 399000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-1	WAP-2R	Total/NA	Water	7470A	
180-137625-2	WAP-3S	Total/NA	Water	7470A	
180-137625-3	WAP-3D	Total/NA	Water	7470A	
180-137625-4	WAP-7S	Total/NA	Water	7470A	
180-137625-5	WAP-7D	Total/NA	Water	7470A	
180-137625-6	WAP-8S	Total/NA	Water	7470A	
180-137625-7	WAP-8I	Total/NA	Water	7470A	
180-137625-8	WAP-8D	Total/NA	Water	7470A	
180-137625-9	WAP-9S	Total/NA	Water	7470A	
180-137625-10	WAP-9I	Total/NA	Water	7470A	
180-137625-11	WAP-9D	Total/NA	Water	7470A	
MB 180-399000/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-399000/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 399007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-1	WAP-2R	Total Recoverable	Water	EPA 6020A	398676
180-137625-2	WAP-3S	Total Recoverable	Water	EPA 6020A	398676
180-137625-3	WAP-3D	Total Recoverable	Water	EPA 6020A	398676
180-137625-4	WAP-7S	Total Recoverable	Water	EPA 6020A	398676
MB 180-398676/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	398676
LCS 180-398676/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	398676

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Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

Metals

Prep Batch: 399052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-5	WAP-7D	Total Recoverable	Water	3005A	
180-137625-6	WAP-8S	Total Recoverable	Water	3005A	
180-137625-7	WAP-8I	Total Recoverable	Water	3005A	
180-137625-8	WAP-8D	Total Recoverable	Water	3005A	
180-137625-9	WAP-9S	Total Recoverable	Water	3005A	
180-137625-10	WAP-9I	Total Recoverable	Water	3005A	
180-137625-11	WAP-9D	Total Recoverable	Water	3005A	
MB 180-399052/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-399052/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-137625-5 MS	WAP-7D	Total Recoverable	Water	3005A	
180-137625-5 MSD	WAP-7D	Total Recoverable	Water	3005A	

Analysis Batch: 399123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-1	WAP-2R	Total/NA	Water	EPA 7470A	399000
180-137625-2	WAP-3S	Total/NA	Water	EPA 7470A	399000
180-137625-3	WAP-3D	Total/NA	Water	EPA 7470A	399000
180-137625-4	WAP-7S	Total/NA	Water	EPA 7470A	399000
180-137625-5	WAP-7D	Total/NA	Water	EPA 7470A	399000
180-137625-6	WAP-8S	Total/NA	Water	EPA 7470A	399000
180-137625-7	WAP-8I	Total/NA	Water	EPA 7470A	399000
180-137625-8	WAP-8D	Total/NA	Water	EPA 7470A	399000
180-137625-9	WAP-9S	Total/NA	Water	EPA 7470A	399000
180-137625-10	WAP-9I	Total/NA	Water	EPA 7470A	399000
180-137625-11	WAP-9D	Total/NA	Water	EPA 7470A	399000
MB 180-399000/1-A	Method Blank	Total/NA	Water	EPA 7470A	399000
LCS 180-399000/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	399000

Analysis Batch: 399192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-1	WAP-2R	Total Recoverable	Water	EPA 6020A	398676
180-137625-2	WAP-3S	Total Recoverable	Water	EPA 6020A	398676
180-137625-3	WAP-3D	Total Recoverable	Water	EPA 6020A	398676
180-137625-4	WAP-7S	Total Recoverable	Water	EPA 6020A	398676
MB 180-398676/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	398676
LCS 180-398676/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	398676

Analysis Batch: 399443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-5	WAP-7D	Total Recoverable	Water	EPA 6020A	399052
180-137625-6	WAP-8S	Total Recoverable	Water	EPA 6020A	399052
180-137625-7	WAP-8I	Total Recoverable	Water	EPA 6020A	399052
180-137625-8	WAP-8D	Total Recoverable	Water	EPA 6020A	399052
180-137625-9	WAP-9S	Total Recoverable	Water	EPA 6020A	399052
180-137625-10	WAP-9I	Total Recoverable	Water	EPA 6020A	399052
180-137625-11	WAP-9D	Total Recoverable	Water	EPA 6020A	399052
MB 180-399052/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	399052
LCS 180-399052/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	399052
180-137625-5 MS	WAP-7D	Total Recoverable	Water	EPA 6020A	399052
180-137625-5 MSD	WAP-7D	Total Recoverable	Water	EPA 6020A	399052

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Client: Haley & Aldrich, Inc. Job ID: 180-137625-1

Project/Site: CCR GW Monitoring FB Culley West

Metals

Analysis Batch: 399556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-5	WAP-7D	Total Recoverable	Water	EPA 6020A	399052
180-137625-6	WAP-8S	Total Recoverable	Water	EPA 6020A	399052
180-137625-7	WAP-8I	Total Recoverable	Water	EPA 6020A	399052
180-137625-8	WAP-8D	Total Recoverable	Water	EPA 6020A	399052
180-137625-9	WAP-9S	Total Recoverable	Water	EPA 6020A	399052
180-137625-10	WAP-9I	Total Recoverable	Water	EPA 6020A	399052
180-137625-11	WAP-9D	Total Recoverable	Water	EPA 6020A	399052
MB 180-399052/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	399052
LCS 180-399052/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	399052
180-137625-5 MS	WAP-7D	Total Recoverable	Water	EPA 6020A	399052
180-137625-5 MSD	WAP-7D	Total Recoverable	Water	EPA 6020A	399052

General Chemistry

Analysis Batch: 397958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-1	WAP-2R	Total/NA	Water	EPA 9040C	
180-137625-2	WAP-3S	Total/NA	Water	EPA 9040C	
180-137625-3	WAP-3D	Total/NA	Water	EPA 9040C	
180-137625-4	WAP-7S	Total/NA	Water	EPA 9040C	
180-137625-5	WAP-7D	Total/NA	Water	EPA 9040C	
180-137625-6	WAP-8S	Total/NA	Water	EPA 9040C	
180-137625-7	WAP-8I	Total/NA	Water	EPA 9040C	
180-137625-8	WAP-8D	Total/NA	Water	EPA 9040C	
180-137625-9	WAP-9S	Total/NA	Water	EPA 9040C	
180-137625-10	WAP-9I	Total/NA	Water	EPA 9040C	
180-137625-11	WAP-9D	Total/NA	Water	EPA 9040C	
LCS 180-397958/26	Lab Control Sample	Total/NA	Water	EPA 9040C	
LCS 180-397958/3	Lab Control Sample	Total/NA	Water	EPA 9040C	

Analysis Batch: 398139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-1	WAP-2R	Total/NA	Water	SM 2540C	
180-137625-2	WAP-3S	Total/NA	Water	SM 2540C	
180-137625-3	WAP-3D	Total/NA	Water	SM 2540C	
180-137625-4	WAP-7S	Total/NA	Water	SM 2540C	
180-137625-5	WAP-7D	Total/NA	Water	SM 2540C	
180-137625-6	WAP-8S	Total/NA	Water	SM 2540C	
180-137625-7	WAP-8I	Total/NA	Water	SM 2540C	
180-137625-8	WAP-8D	Total/NA	Water	SM 2540C	
180-137625-9	WAP-9S	Total/NA	Water	SM 2540C	
180-137625-10	WAP-9I	Total/NA	Water	SM 2540C	
180-137625-11	WAP-9D	Total/NA	Water	SM 2540C	
MB 180-398139/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-398139/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-137625-1 DU	WAP-2R	Total/NA	Water	SM 2540C	
180-137625-11 DU	WAP-9D	Total/NA	Water	SM 2540C	

Eurofins Pittsburgh

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Prep Batch: 564511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-1	WAP-2R	Total/NA	Water	PrecSep-21	
180-137625-2	WAP-3S	Total/NA	Water	PrecSep-21	
180-137625-3	WAP-3D	Total/NA	Water	PrecSep-21	
180-137625-4	WAP-7S	Total/NA	Water	PrecSep-21	
180-137625-5	WAP-7D	Total/NA	Water	PrecSep-21	
MB 160-564511/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-564511/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 564514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-1	WAP-2R	Total/NA	Water	PrecSep_0	
180-137625-2	WAP-3S	Total/NA	Water	PrecSep_0	
180-137625-3	WAP-3D	Total/NA	Water	PrecSep_0	
180-137625-4	WAP-7S	Total/NA	Water	PrecSep_0	
180-137625-5	WAP-7D	Total/NA	Water	PrecSep_0	
MB 160-564514/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-564514/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 564517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-6	WAP-8S	Total/NA	Water	PrecSep-21	
180-137625-7	WAP-8I	Total/NA	Water	PrecSep-21	
180-137625-8	WAP-8D	Total/NA	Water	PrecSep-21	
180-137625-9	WAP-9S	Total/NA	Water	PrecSep-21	
180-137625-10	WAP-9I	Total/NA	Water	PrecSep-21	
180-137625-11	WAP-9D	Total/NA	Water	PrecSep-21	
MB 160-564517/12-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-564517/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-564517/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 564520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137625-6	WAP-8S	Total/NA	Water	PrecSep_0	
180-137625-7	WAP-8I	Total/NA	Water	PrecSep_0	
180-137625-8	WAP-8D	Total/NA	Water	PrecSep_0	
180-137625-9	WAP-9S	Total/NA	Water	PrecSep_0	
180-137625-10	WAP-9I	Total/NA	Water	PrecSep_0	
180-137625-11	WAP-9D	Total/NA	Water	PrecSep_0	
MB 160-564520/12-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-564520/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-564520/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Eurofins Pittsburgh

Page 43 of 46

Job ID: 180-137625-1

Eurofins Pittsburgh

301 Alpha Drive RIDC Park Pittsburgh, PA 15238

Chain of Custody Record

💸 eurofins

Environment Testing America

Phone: 412-963-7058 Fax: 412-963-2468 Carrier Tracking No(s): Client Information Haves, Ken 180-80665-14503.2 Client Contact: Phone: 3/7-473-1325 State of Origin: Page: Mark Breting Ken. Hayes@et.eurofinsus.com Page 2 of 3 Company: Job#: Atlas Technical Consultants LLC **Analysis Requested** Due Date Requested: Preservation Codes: 7988 Centerpoint Drive Suite 100 A - HCL M - Hexane TAT Requested (days): B - NaOH N - None Indianapolis C - Zn Acetate O - AsNaO2 State, Zip: P - Na2O4S D - Nitric Acid E - NaHSO4 Q - Na2SO3 IN, 46256 Compliance Project: △ Yes △ No F - MeOH R - Na2S2O3 Phone: G - Amchlor S - H2SO4 864-214-8750(Tel) FB-242026. AB-241410 T - TSP Dodecahydrate H - Ascorbic Acid Email: WO #: U - Acetone J - DI Water V - MCAA mark.breting@atcassociates.com K-EDTA W - pH 4-5 Project Name: Project #: 9040C, 9066A_ORGFM_28D L - EDA Z - other (specify) CCR GW Monitoring FB Culley West 9315_Ra226, 9320_Ra228 18016014 Other: SSOW#: 6020A, 7470A Matrix Sample Type S=solid, Sample (C=comp, Sample Identification Sample Date G=grab) BT=Tissue, A=Alr Special Instructions/Note: Time Preservation Code: D 5.4.72 1342 w 1050 1130 1212 1247 Virginia Beach 733 829 908 910 1028 WAP -1150 Possible Hazard Identification Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Archive For Return To Client Disposal By Lab Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Method of Shipment: Empty Kit Relinquished by: Date: Relinquished by: Date/Time: Relinquished by: Received by: Company Relinquished by: Date/Time: Date/Time: Company Company Received by: Custody Seals Intact: Custody Seal No .: Cooler Temperature(s) °C and Other Remarks: Δ Yes Δ No

> Ver: 06/08/2021 6/8/2022

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 180-137625-1

Login Number: 137625 List Source: Eurofins Pittsburgh

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 surv meter.</td <td>/ey N/A</td> <td></td>	/ey 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 COO	C. True	
Samples are received within Holding Time (excluding tests with immediate HTs)	e 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: 180-137625-1

Login Number: 137625
List Source: Eurofins St. Louis
List Number: 2
List Creation: 05/06/22 01:13 PM

Creator: Worthington, Sierra M

Creator: worthington, Sierra w		
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.	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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ANALYTICAL REPORT

Eurofins Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

Laboratory Job ID: 180-137837-1

Client Project/Site: CCR GW Monitoring FB Culley West

Revision: 1

For:

Haley & Aldrich, Inc. 465 Medford St Suite 2200 Boston, Massachusetts 02129-0414

Attn: Mark Miesfeldt

Kuntl Hay

Authorized for release by: 6/21/2022 12:14:38 PM

Ken Hayes, Project Manager II (615)301-5035

Ken.Hayes@et.eurofinsus.com

..... Links

Review your project results through

Have a Question?



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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Job ID: 180-137837-1

Laboratory: Eurofins Pittsburgh

Narrative

Job Narrative 180-137837-1

Comments

No additional comments.

Revision

The report being provided is a revision of the original report sent on 5/25/2022. The report (revision 1) is being revised due to: Client - To merge Job -2 samples into job -1.

Receipt

The samples were received on 5/10/2022 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.1° C.

GC Semi VOA

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

RAD

Methods 903.0, 9315: Radium-226 batch 565412

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 (180-137837-1), (LCS 160-565412/1-A), (LCSD 160-565412/2-A) and (MB 160-565412/16-A)

Method 9320: Radium 228 Batch 160-569652:

The following sample did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interference. During preparation the analyst visually noted matrix effects. The data have been reported with this narrative. WAP-1 (180-137837-1)

Methods 904.0, 9320: Radium-228 batch 569652:

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 (180-137837-1), (LCS 160-569652/2-A), (LCSD 160-569652/3-A) and (MB 160-569652/1-A)

Method PrecSep 0: Radium-228 Prep Batch 160-565413

The following sample was prepared at a reduced aliquot due to Matrix: WAP-1 (180-137837-1). A laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep 0: Radium-228 Prep Batch 160-569652

Insufficient sample volume was available to perform a sample duplicate for the following samples: WAP-1 (180-137837-1). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep_0: Radium-228 Prep Batch 160-569652

The following sample was prepared at a reduced aliquot due to Matrix: WAP-1 (180-137837-1). A laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-565412

The following sample was prepared at a reduced aliquot due to Matrix: WAP-1 (180-137837-1). A laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

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.

Job ID: 180-137837-1

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Case Narrative

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Job ID: 180-137837-1 (Continued)

Laboratory: Eurofins Pittsburgh (Continued)

General Chemistry

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

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Job ID: 180-137837-1

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Job ID: 180-137837-1

Project/Site: CCR GW Monitoring FB Culley West

Qualifiers

M	eta	Is

Qualifier **Qualifier Description**

Compound was found in the blank and sample.

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

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**

G The Sample MDC is greater than the requested RL. U

Result is less than the sample detection limit.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL Contains Free Liquid **CFU** Colony Forming Unit **CNF** Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac **Dilution Factor**

Detection Limit (DoD/DOE) DL

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) Minimum Detectable Concentration (Radiochemistry) MDC

MDL Method Detection Limit Minimum Level (Dioxin) ML 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

Practical Quantitation Limit PQL

PRES Presumptive **Quality Control** QC

RER Relative Error Ratio (Radiochemistry)

RI Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Laboratory: Eurofins Pittsburgh

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	05-29-22
California	State	2891	04-30-22 *
Connecticut	State	PH-0688	05-29-22
Florida	NELAP	E871008	05-29-22
Georgia	State	PA 02-00416	05-29-22
Illinois	NELAP	004375	05-29-22
Kansas	NELAP	E-10350	05-29-22
Kentucky (UST)	State	162013	04-30-22 *
Kentucky (WW)	State	KY98043	05-29-22
Louisiana	NELAP	04041	05-29-22
Maine	State	PA00164	03-06-24
Minnesota	NELAP	042-999-482	05-29-22
Nevada	State	PA00164	08-31-22
New Hampshire	NELAP	2030	05-29-22
New Jersey	NELAP	PA005	05-29-22
New York	NELAP	11182	05-29-22
North Carolina (WW/SW)	State	434	05-29-22
North Dakota	State	R-227	04-30-22 *
Oregon	NELAP	PA-2151	02-07-23
Pennsylvania	NELAP	02-00416	05-29-22
Rhode Island	State	LAO00362	12-31-21 *
South Carolina	State	89014	05-29-22
Texas	NELAP	T104704528	05-29-22
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-22
Virginia	NELAP	10043	05-25-22
West Virginia DEP	State	142	05-29-22
Wisconsin	State	998027800	08-31-22

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 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	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	07-01-22
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
lowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22

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

Eurofins Pittsburgh

6/21/2022 (Rev. 1)

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Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Laboratory: Eurofins St. Louis (Continued)

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

Authority	Program	Identification Number	Expiration Date
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-23
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22

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Job ID: 180-137837-1

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Sample Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

 Lab Sample ID
 Client Sample ID
 Matrix
 Collected
 Received

 180-137837-1
 WAP-1
 Water
 05/06/22 08:35
 05/10/22 09:00

Job ID: 180-137837-1

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Method Summary

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
EPA 9040C	рН	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

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.

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

Laboratory References:

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

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

Job ID: 180-137837-1

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Lab Chronicle

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-1 Lab Sample ID: 180-137837-1

Date Collected: 05/06/22 08:35

Date Received: 05/10/22 09:00

Matrix: Water

Bron Tuno	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Prep Type Total/NA	Analysis	EPA 9056A t ID: CHIC2100A	Kuii	1	Amount	Amount	399568	05/21/22 21:21	Analyst LWM	TAL PIT
Total Recoverable Total Recoverable	Prep Analysis Instrumen	3005A EPA 6020A t ID: DORY		1	25 mL	25 mL	399200 399450	05/18/22 11:08 05/19/22 12:51		TAL PIT TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	7470A EPA 7470A t ID: HGY		1	50 mL	50 mL	399384 399476	05/19/22 12:46 05/20/22 10:00		TAL PIT TAL PIT
Total/NA	Analysis Instrumen	EPA 9040C t ID: PHTITRATOR		1			398727	05/13/22 10:14	HEK	TAL PIT
Total/NA	Analysis Instrumen	SM 2540C t ID: NOEQUIP		1	100 mL	100 mL	398280	05/10/22 14:32	JCR	TAL PIT
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep-21 9315 t ID: GFPCRED		1	499.84 mL	1.0 g	565412 569033	05/13/22 10:29 06/08/22 22:23		TAL SL TAL SL
Total/NA Total/NA	Prep Analysis Instrumen	PrecSep_0 9320 t ID: GFPCPURPLE		1	485.02 mL	1.0 g	569652 570477	06/13/22 10:44 06/17/22 14:05		TAL SL TAL SL
Total/NA	Analysis Instrumen	Ra226_Ra228 t ID: NOEQUIP		1			570889	06/20/22 19:41	ЕМН	TAL SL

Laboratory References:

TAL PIT = Eurofins Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058 TAL SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: TAL PIT

Batch Type: Prep

EMR = Elizabeth Rarick

RJR = Ron Rosenbaum

Batch Type: Analysis

HEK = Hope Kiesling

JCR = Jessica Rodgers

LWM = Larry Matko

RJR = Ron Rosenbaum

RSK = Robert Kurtz

Lab: TAL SL

Batch Type: Prep

MS = Matthew Swaringam

Batch Type: Analysis

CLP = Cassandra Park

EMH = Elizabeth Hoerchler

FLC = Fernando Cruz

Eurofins Pittsburgh

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Job ID: 180-137837-1

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1:

Client Sample ID: WAP-1

Lab Sample ID: 180-137837-1

Matrix: Water

Job ID: 180-137837-1

Date Collected: 05/06/22 08:35 Date Received: 05/10/22 09:00

Analyte		Result	Qualifier	RL	MDL	. Unit		D	Prepared	Analyzed	Dil Fa
Chloride		34		1.0	0.7	mg/l	_	_		05/21/22 21:21	
Fluoride		1.0		0.10	0.026	3 mg/l	_			05/21/22 21:21	
Sulfate		220		1.0	0.76	3 mg/l	-			05/21/22 21:21	
Method: EPA 6020A	- Metals	(ICP/MS) - To	otal Reco	verable							
Analyte		Result	Qualifier	RL	MDL	. Unit		D	Prepared	Analyzed	Dil Fa
Antimony		0.0020		0.0020	0.0005	mg/l	-		05/18/22 11:08	05/19/22 12:51	
Arsenic		0.0088		0.0010	0.00028	3 mg/l	=		05/18/22 11:08	05/19/22 12:51	
Barium		0.49		0.010	0.003	l mg/l	=		05/18/22 11:08	05/19/22 12:51	
Beryllium		0.00028	J	0.0010	0.00027	mg/l	-		05/18/22 11:08	05/19/22 12:51	
Boron		ND		0.080	0.060) mg/l	-		05/18/22 11:08	05/19/22 12:51	
Cadmium		ND		0.0010	0.00022	2 mg/l	_		05/18/22 11:08	05/19/22 12:51	
Calcium		160		0.50	0.13	3 mg/l	_		05/18/22 11:08	05/19/22 12:51	
Chromium		0.010		0.0020	0.0015	5 mg/l	_		05/18/22 11:08	05/19/22 12:51	
Cobalt		0.0037		0.00050	0.00026	3 mg/l	=		05/18/22 11:08	05/19/22 12:51	
_ead		0.011	В	0.0010	0.00017				05/18/22 11:08	05/19/22 12:51	
_ithium		0.010		0.0050	0.00083	_			05/18/22 11:08	05/19/22 12:51	
Molybdenum		0.0012	J	0.0050	0.0006	_			05/18/22 11:08	05/19/22 12:51	
Selenium		ND		0.0050	0.00074				05/18/22 11:08	05/19/22 12:51	
Γhallium		ND		0.0010	0.00047	•			05/18/22 11:08	05/19/22 12:51	
Method: EPA 7470A	- Mercur	v (CVAA)									
Analyte	Morour	• • •	Qualifier	RL	MDI	. Unit		D	Prepared	Analyzed	Dil Fa
Mercury		ND		0.00020	0.00013	mg/l	-	_	05/19/22 12:46	05/20/22 10:00	
General Chemistry											
Analyte		Result	Qualifier	RL		. Unit		D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids		770		10	10	mg/l	_			05/10/22 14:32	
Analyte		Result	Qualifier	RL	RI	. Unit		D	Prepared	Analyzed	Dil Fa
Н		7.4	HF	0.1	0.1	SU		_		05/13/22 10:14	
Method: 9315 - Radi	um-226 ((GFPC)									
	·		Count	Total							
			Uncert.	Uncert.							
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit		Prepared	Analyzed	Dil Fa
Radium-226	0.543	U	0.503	0.505	1.00	0.771	pCi/L		05/13/22 10:29	06/08/22 22:23	
Carrier	%Yield	Qualifier	Limits						Prepared	Analyzed	Dil Fa
Ba Carrier	69.8		40 - 110						05/13/22 10:29	06/08/22 22:23	
Method: 9320 - Radi	um-228 (GFPC)									
		,	Count	Total							
			Uncert.	Uncert.							
Analyte		Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC			Prepared	Analyzed	Dil Fa
Radium-228	0.692	UG	0.739	0.742	1.00	1.20	pCi/L		06/13/22 10:44	06/17/22 14:05	
Carrier	%Yield	Qualifier	Limits						Prepared	Analyzed	Dil Fa
Ba Carrier	75.8	<u> </u>	40 - 110							06/17/22 14:05	

Client Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-137837-1

Project/Site: CCR GW Monitoring FB Culley West

Client Sample ID: WAP-1 Lab Sample ID: 180-137837-1

Date Collected: 05/06/22 08:35 **Matrix: Water** Date Received: 05/10/22 09:00

Method: Ra226 _.	_Ra228 - (Combined	Radium-226	and	Radium-228	

motriod: rtazzo_rta		ibilioa ita	alaiii 22 0 a	iid itaaiaii						
			Count	Total						
			Uncert.	Uncert.						
Analyte	Result	Qualifier	(2σ+/-)	(2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium	1.24		0.894	0.898	5.00	1.20	pCi/L		06/20/22 19:41	1
226 + 228										

Project/Site: CCR GW Monitoring FB Culley West

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-399568/7

Matrix: Water

Analysis Batch: 399568

Client Sample ID: Method Blank

Prep Type: Total/NA

Job ID: 180-137837-1

MB MB Analyte Result Qualifier RL **MDL** Unit Analyzed Dil Fac D **Prepared** Chloride ND 1.0 0.71 mg/L 05/21/22 12:03 Fluoride ND 0.10 0.026 mg/L 05/21/22 12:03 Sulfate ND 1.0 0.76 mg/L 05/21/22 12:03

Lab Sample ID: LCS 180-399568/5

Matrix: Water

Analysis Batch: 399568

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

		Spike	LCS	LCS				%Rec	
Analyte	A	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride		50.0	48.5		mg/L		97	80 - 120	
Fluoride		2.50	2.36		mg/L		94	80 - 120	
Sulfate		50.0	48.9		mg/L		98	80 - 120	

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

Lab Sample ID: MB 180-399200/1-A

Matrix: Water

Analysis Batch: 399450

Client Sample ID: Method Blank Prep Type: Total Recoverable

Prep Batch: 399200

7 many one Date m eve nee						op =atom			
-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0020	0.00051	mg/L		05/18/22 11:08	05/19/22 19:15	1
Arsenic	ND		0.0010	0.00028	mg/L		05/18/22 11:08	05/19/22 19:15	1
Barium	ND		0.010	0.0031	mg/L		05/18/22 11:08	05/19/22 19:15	1
Beryllium	ND		0.0010	0.00027	mg/L		05/18/22 11:08	05/19/22 19:15	1
Boron	ND		0.080	0.060	mg/L		05/18/22 11:08	05/19/22 19:15	1
Cadmium	ND		0.0010	0.00022	mg/L		05/18/22 11:08	05/19/22 19:15	1
Calcium	ND		0.50	0.13	mg/L		05/18/22 11:08	05/19/22 19:15	1
Chromium	ND		0.0020	0.0015	mg/L		05/18/22 11:08	05/19/22 19:15	1
Cobalt	ND		0.00050	0.00026	mg/L		05/18/22 11:08	05/19/22 19:15	1
Lead	0.000178	J	0.0010	0.00017	mg/L		05/18/22 11:08	05/19/22 19:15	1
Lithium	0.00126	J	0.0050	0.00083	mg/L		05/18/22 11:08	05/19/22 19:15	1
Molybdenum	ND		0.0050	0.00061	mg/L		05/18/22 11:08	05/19/22 19:15	1
Selenium	ND		0.0050	0.00074	mg/L		05/18/22 11:08	05/19/22 19:15	1
Thallium	ND		0.0010	0.00047	mg/L		05/18/22 11:08	05/19/22 19:15	1
_									

Lab Sample ID: LCS 180-399200/2-A

Matrix: Water

Cobalt

Analysis Batch: 399450

Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 399200

95

80 - 120

Spike LCS LCS %Rec Added Limits **Analyte** Result Qualifier Unit D %Rec Antimony 0.250 0.246 mg/L 98 80 - 120 Arsenic 1.00 0.938 mg/L 94 80 - 120 Barium 1.00 0.919 mg/L 92 80 - 120 Beryllium 0.500 0.481 mg/L 96 80 - 120 Boron 1.25 1.21 mg/L 97 80 - 120 Cadmium 0.500 0.469 mg/L 94 80 - 120 80 - 120 Calcium 25.0 26.1 mg/L 105 Chromium 0.500 0.465 mg/L 93 80 - 120

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0.477

mg/L

0.500

6/21/2022 (Rev. 1)

Client: Haley & Aldrich, Inc. Job ID: 180-137837-1

Project/Site: CCR GW Monitoring FB Culley West

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

Lab Sample ID: LCS 180-399200/2-A **Matrix: Water**

Analysis Batch: 399450

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 399200

/ manyolo Datom coo too	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Lead	0.500	0.476		mg/L		95	80 - 120
Lithium	0.500	0.472		mg/L		94	80 - 120
Molybdenum	0.500	0.478		mg/L		96	80 - 120
Selenium	1.00	0.915		mg/L		92	80 - 120
Thallium	1.00	0.945		mg/L		95	80 - 120

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-399384/1-A

Matrix: Water

Analyte

Mercury

Analyte

Mercury

Analysis Batch: 399476

MB MB

ND

Result Qualifier

RL 0.00020

MDL Unit 0.00013 mg/L

Prepared 05/19/22 12:46 05/20/22 09:40

Client Sample ID: Lab Control Sample

Analyzed

Prep Type: Total/NA

Prep Batch: 399384

Prep Type: Total/NA

Prep Batch: 399384

Prep Type: Total/NA

Client Sample ID: Method Blank

Lab Sample ID: LCS 180-399384/2-A

Matrix: Water

Analysis Batch: 399476

Spike Added 0.00250

LCS LCS 0.00277

Result Qualifier

Unit mg/L

%Rec 111 %Rec Limits

80 - 120

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-398727/3

Matrix: Water

Analysis Batch: 398727

Analyte

Spike Added 7.00

LCS LCS Result Qualifier 7.0

Unit SU

%Rec 100

%Rec

Client Sample ID: Lab Control Sample

Limits 99 - 101

Client Sample ID: Method Blank

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

Lab Sample ID: MB 180-398280/2

Matrix: Water

Analysis Batch: 398280

MB MB

Analyte Total Dissolved Solids Result Qualifier ND

RL 10

MDL Unit 10 mg/L

Prepared

Analyzed 05/10/22 14:32

Dil Fac

Lab Sample ID: LCS 180-398280/1

Matrix: Water

Analysis Batch: 398280

Analyte **Total Dissolved Solids**

Spike Added 251

LCS LCS Result Qualifier 234

Unit mg/L %Rec 93

%Rec Limits

Client Sample ID: Lab Control Sample

85 - 115

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Prep Type: Total/NA

Prep Type: Total/NA

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-565412/16-A

Matrix: Water

Analysis Batch: 569033

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 565412

MB MB Uncert. Uncert. **MDC** Unit Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL Prepared Analyzed Dil Fac Radium-226 0.02927 U 0.122 0.122 1.00 0.243 pCi/L 05/13/22 10:29 06/08/22 22:24

Total

Count

MB

Carrier %Yield Qualifier Limits Prepared Analyzed Dil Fac Ba Carrier 99.5 40 - 110 05/13/22 10:29 06/08/22 22:24

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 565412

Lab Sample ID: LCS 160-565412/1-A **Matrix: Water**

Analysis Batch: 569033

Analyte

Radium-226

Total

1.24

Uncert. $(2\sigma + / -)$ RL MDC Unit

0.253 pCi/L

1.00

%Rec Limits

85

%Rec

75 - 125

LCS LCS Carrier %Yield Qualifier Limits

Ba Carrier 96.8 40 - 110

Lab Sample ID: LCSD 160-565412/2-A **Matrix: Water**

Analysis Batch: 569033

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 565412

Total

LCS LCS

Result Qual

9.666

Spike LCSD LCSD Uncert. Added $(2\sigma + / -)$ Result Qual

Spike

Added

11.3

RER %Rec RL **MDC** Unit Limits Analyte %Rec RER Limit Radium-226 1.18 1.00 0.273 pCi/L 78 75 - 125 0.32 11.3 8.897

LCSD LCSD

Carrier %Yield Qualifier Limits Ba Carrier 94.8 40 - 110

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-569652/1-A

Matrix: Water

Analysis Batch: 570479

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 569652

Count Total MB MB Uncert. Uncert. Analyte Result Qualifier $(2\sigma + / -)$ $(2\sigma + / -)$ RL **MDC** Unit Prepared Dil Fac Analyzed Radium-228 Ū 0.338 1.00 06/13/22 10:44 06/17/22 14:02 0.2531 0.337 0.562 pCi/L

> MB MB

Carrier %Yield Qualifier Limits Dil Fac Prepared Analyzed Ba Carrier 97.5 40 - 110 06/13/22 10:44 06/17/22 14:02 40 - 110 Y Carrier 86.7 06/13/22 10:44 06/17/22 14:02

QC Sample Results

Client: Haley & Aldrich, Inc. Job ID: 180-137837-1

Project/Site: CCR GW Monitoring FB Culley West

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

Lab Sample ID: LCS 160-569652/2-A **Client Sample ID: Lab Control Sample**

Matrix: Water

Analysis Batch: 570477

Prep Type: Total/NA

Prep Batch: 569652

Total %Rec Spike LCS LCS Uncert. Analyte Added Result Qual $(2\sigma + / -)$ RL**MDC** Unit %Rec Limits Radium-228 8.53 7.595 1.08 1.00 0.523 pCi/L 75 - 125

LCS LCS

%Yield Qualifier Carrier Limits Ba Carrier 98.3 40 - 110 Y Carrier 86.0 40 - 110

Lab Sample ID: LCSD 160-569652/3-A

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 569652

Matrix: Water

Analysis Batch: 570477

Total **Spike** LCSD LCSD Uncert. Analyte Added Result Qual $(2\sigma + / -)$ Radium-228 8.53 7.525 1.08

RL 1.00

MDC Unit 0.532 pCi/L

%Rec %Rec Limits 88 75 - 125

RER Limit RER 0.03

LCSD LCSD

%Yield Qualifier Carrier Limits Ba Carrier 40 - 110 96.3 Y Carrier 85.2 40 - 110

Client: Haley & Aldrich, Inc.

Project/Site: CCR GW Monitoring FB Culley West

HPLC/IC

Analysis Batch: 399568

Lab Sample ID 180-137837-1	Client Sample ID WAP-1	Prep Type Total/NA	Matrix Water	Method EPA 9056A	Prep Batch
MB 180-399568/7	Method Blank	Total/NA	Water	EPA 9056A	
LCS 180-399568/5	Lab Control Sample	Total/NA	Water	EPA 9056A	

Metals

Prep Batch: 399200

Lab Sample ID 180-137837-1	Client Sample ID WAP-1	Prep Type Total Recoverable	Matrix Water	Method 3005A	Prep Batch
MB 180-399200/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-399200/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 399384

Lab Sample ID 180-137837-1	Client Sample ID WAP-1	Prep Type Total/NA	Matrix Water	Method 7470A	Prep Batch
MB 180-399384/1-A	Method Blank	Total/NA	Water	7470A	
LCS 180-399384/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 399450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137837-1	WAP-1	Total Recoverable	Water	EPA 6020A	399200
MB 180-399200/1-A	Method Blank	Total Recoverable	Water	EPA 6020A	399200
LCS 180-399200/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020A	399200

Analysis Batch: 399476

Lab Sample ID 180-137837-1	Client Sample ID WAP-1	Prep Type Total/NA	Matrix Water	Method EPA 7470A	Prep Batch 399384
MB 180-399384/1-A	Method Blank	Total/NA	Water	EPA 7470A	399384
LCS 180-399384/2-A	Lab Control Sample	Total/NA	Water	EPA 7470A	399384

General Chemistry

Analysis Batch: 398280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137837-1	WAP-1	Total/NA	Water	SM 2540C	
MB 180-398280/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-398280/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 398727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137837-1	WAP-1	Total/NA	Water	EPA 9040C	
LCS 180-398727/3	Lab Control Sample	Total/NA	Water	EPA 9040C	

Rad

Prep Batch: 565412

Lab Sample ID 180-137837-1	Client Sample ID WAP-1	Prep Type Total/NA	Matrix Water	Method PrecSep-21	Prep Batch
MB 160-565412/16-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-565412/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-565412/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

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Job ID: 180-137837-1

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6/21/2022 (Rev. 1)

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

Prep Batch: 569652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-137837-1	WAP-1	Total/NA	Water	PrecSep_0	
MB 160-569652/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-569652/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-569652/3-	-A Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Job ID: 180-137837-1

Eurofins Pittsburgh

301 Alpha Drive RIDC Park Pittsburgh, PA 15238 **Chain of Custody Record**

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Environment Testing America

Client Information	Sampler:	ay To	1185		PM: yes, Ker	n				Carrier Tracking No(s):				COC No: 180-80666-14505.1	
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ark.breting@atcassociates.com	· · · · · · · · · · · · · · · · · · ·				No)								J Di	Water V - MCAA	
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CR Groundwater Monitoring FB Culley	18016014 SSOW#:				크립블	ξ		Ra22					Other	: 1	
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	0	Sample	(C=comp,	O=waste/oil,	ere ere	9040C, 9056A	2640C_Calcd	9316_Ra226,					ota	Special Instructions/Notes	
ample Identification	Sample Date	Time		BT=Tissue, A=Al tion Code:		N D	N	D	100	na sale in	100		<u> </u>	Special Instructions/Note:	
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CCA-AP-5I	5-6-22	11:05	G	W	+		1							1. Ter Correct	
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Non-Hazard Flammable Skin Irritant Pois	son B Unkr	nown \square	Radiologica	ı			urn To		_	1 Disposal			rchive F		
eliverable Requested: I, II, III, IV, Other (specify)	301.2				Sp			ns/QC R	equiren	nents:					
mpty Kit Relinquished by:		Date:	_		Time:	:				Met	hod of Ship	ment:			
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Ve6/2/1/8/2022 (Rev. 1)

1-1: ter collected N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2SSO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
W - PH 4-5
Z - other (specify) Special Instructions/Note: Ver: 06/08/2021 の記念 Months Company Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Mont Special Instructions/QC Requirements: COC No: 180-80666-14505.1 reservation Codes; A-HCL
B-NaOH
C-Zn Acetate
D-Nihr Acid
F-MASO4
F-MOH
G-Amchlor
H-Ascorbic Acid Page: Page 1 of 2 Job #: J-DI Water K-EDTA L-EDA Enanistance to redmut listoT Date/Time: Date/Time: Method of Shipment: Camier Tracking No(s): State of Origin: Analysis Requested Cooler Temperature(s) °C and Other Remarks: Lab PM: Hayes, Ken E-Mail: Ken.Hayes@et.eurofinsus.com 9316_Ra226, 9320_Ra228 7 Received by. A0147 ,A0208 DAOC, 9066A_ORGFM_28D Time: (on to ear) GRMBM mohag Company Company Matrix (w-water, Swsolld, O-waste/oll, Preservation Code: Company 3 3 3 Radiological Type (C=comp, Sample G=grab) Sampler. Hay lay To 1125 -0880 0 0 O Compliance Project: A Yes A No 5-5-3 12:38 50-12 11:05 8:35 5-5-22 623 Sample Time PO #: FB-242026. AB-241410 Date: Unknown Phone: 812: 1455 Date/Time: 5- (ケーカン Date/Time: TAT Requested (days): Due Date Requested: 5-6-33 Sample Date Project #: 18016014 Date/Time: 780-137837 Chain of Custody Poison B Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify) Custody Seal No.: Project Name: CCR Groundwater Monitoring FB Culley 7988 Centerpoint Drive Suite 100 mark.breting@atcassociates.com Company: Atlas Technical Consultants LLC Blank CR AP SH mpty Kit Relinquished by: Relinquished by: Custody Seals Intact: Client Information Sample Identification 864-214-8750(Tel) 1012 elinquished by: elinquished by: Client Contact Mark Breting Indianapolis State, Zip: IN, 46256

Virginia Dead.

Chain of Custody Record

& eurofins | Environment Testing | America

Client: Haley & Aldrich, Inc.

Job Number: 180-137837-1

Login Number: 137837 List Source: Eurofins Pittsburgh

List Number: 1

Creator: Abernathy, Eric L

ordior. Abornatny, End E		
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	

Client: Haley & Aldrich, Inc.

Job Number: 180-137837-1

Login Number: 137837 List Source: Eurofins St. Louis
List Number: 2 List Creation: 05/12/22 11:07 AM

Creator: Booker, Autumn R

Answer	Comment
True	
True	
True	
True	
N/A	
True	
N/A	
	True True True True N/A True True True True True True True True