Prepared for
Illinois Power Generating Company

Date
January 31, 2023

Project No.
1940102203-015

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

PRIMARY ASH POND

NEWTON POWER PLANT

NEWTON, ILLINOIS

CCR UNIT 501

RAMBOLL Bright ideas. Sustainable change.

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NEWTON POWER PLANT PRIMARY ASH POND

Project name	**Newton Power Plant Primary Ash Pond**
Project no.	**1940102203-015**
Recipient	**Illinois Power Generating Company**
Document type	**Annual Groundwater Monitoring and Corrective Action Report**
Version	**FINAL**
Date	**January 31, 2023**
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Description	**Annual Report in Support of the CCR Rule Groundwater Monitoring Program**

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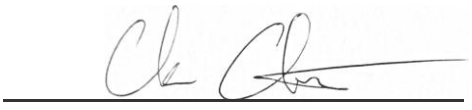

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ACRONYMS AND ABBREVIATIONS

§	Section
35 I.A.C.	Title 35 of the Illinois Administrative Code
40 C.F.R.	Title 40 of the Code of Federal Regulations
ASD	Alternate Source Demonstration
CCR	coal combustion residuals
CMA	Corrective Measures Assessment
GWPS	groundwater protection standard
IEPA	Illinois Environmental Protection Agency
NA	not applicable
NPP	Newton Power Plant
NRT/OBG	Natural Resource Technology, an OBG Company
PAP	Primary Ash Pond
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SAP	Sampling and Analysis Plan
SSI	statistically significant increase
SSL	statistically significant level
TBD	to be determined
TDS	total dissolved solids

EXECUTIVE SUMMARY

This report has been prepared to provide the information required by Title 40 of the Code of Federal Regulations (40 C.F.R.) Section (§) 257.90(e) for the Primary Ash Pond (PAP) located at the Newton Power Plant (NPP) near Newton, Illinois.

Groundwater is being monitored at the PAP in accordance with the Assessment Monitoring Program requirements specified in 40 C.F.R. § 257.95. Assessment monitoring was initiated at the PAP on June 6, 2022.

No changes were made to the monitoring system in 2022 (no wells were installed or decommissioned). As discussed in Section 5 of this annual report, the monitoring well network will be updated in 2023 to use the same monitoring well network developed for compliance with Title 35 of the Illinois Administrative Code (35 I.A.C.) § 845, which was submitted to the Illinois Environmental Protection Agency (IEPA) via an operating permit application.

The following Statistically Significant Increases (SSIs) of 40 C.F.R. § 257 Appendix III parameter concentrations greater than background concentrations were determined:

- Calcium at wells APW07, APW08, APW09, and APW10
- Chloride at well APW07 and APW09
- Sulfate at wells APW08, APW09, and APW10
- Total Dissolved Solids (TDS) at wells APW09 and APW10

Alternate source evaluations were inconclusive for one or more of the SSIs. Consequently and in accordance with 40 C.F.R. § 257.94(e)(2), an Assessment Monitoring Program was established for the NEW PAP on June 6, 2022 and the required notifications completed. Statistically Significant Levels (SSLs) of 40 C.F.R. § 257 Appendix IV parameters over groundwater protection standards (GWPSs) have not been determined, but SSIs of Appendix III parameters greater than background values were determined.

1. INTRODUCTION

This report has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of Illinois Power Generating Company, to provide the information required by 40 C.F.R. § 257.90(e) for the PAP located at the NPP near Newton, Illinois.

In accordance with 40 C.F.R. § 257.90(e), the owner or operator of a coal combustion residuals (CCR) unit must prepare an Annual Groundwater Monitoring and Corrective Action Report for the preceding calendar year that documents the status of the Groundwater Monitoring and Corrective Action Program for the CCR unit, summarizes key actions completed, describes any problems encountered, discusses actions to resolve the problems, and projects key activities for the upcoming year. At a minimum, the annual report must contain the following information, to the extent available:

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.
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.
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.
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 relative to background levels).
5. Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.
6. 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:
    i. 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.
    ii. 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.
    iii. If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III of §257 pursuant to §257.94(e):
        A. Identify those constituents listed in Appendix III of §257 and the names of the monitoring wells associated with such an increase.
        B. Provide the date when the assessment monitoring program was initiated for the CCR unit.

iv. 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 of §257 pursuant to §257.95(g) include all of the following:

   A. Identify those constituents listed in Appendix IV of §257 and the names of the monitoring wells associated with such an increase.

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

   C. Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit.

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

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

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

This report provides the required information for the PAP for calendar year 2022.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

Comparison of background groundwater quality with concentrations of parameters in compliance monitoring wells observed during the November 9-10, 2021 Detection Monitoring Program sampling event identified an SSI for one or more 40 C.F.R. § 257 Appendix III parameters at the PAP.

Alternate source evaluations were inconclusive for the SSIs at the PAP. Consequently, and in accordance with 40 C.F.R. § 257.94(e), an Assessment Monitoring Program in accordance with 40 C.F.R. § 257.95 was established by June 6, 2022 and the required notification was completed for the PAP.

3. KEY ACTIONS COMPLETED IN 2022

The monitoring program is summarized in **Table A** on the following page. The groundwater monitoring system, including the CCR unit and all background and compliance monitoring wells, is presented in **Figure 1**. No changes were made to the monitoring system in 2022 (no wells were installed or decommissioned). In general, one groundwater sample was collected from each background and compliance well during each monitoring event.[1] All samples were collected and analyzed in accordance with the Sampling and Analysis Plan (SAP) (Natural Resource Technology, an OBG Company [NRT/OBG], 2017a). Potentiometric surface maps for the November 2021 event and both monitoring events in 2022 are included in **Figures 2 through 4**. All monitoring data and analytical results obtained under 40 C.F.R. § 257.90 through 257.98 (as applicable) in the third quarter of 2021 and both monitoring events in 2022 are presented in **Tables 1 through 3**. Laboratory reports for the third quarter of 2021 and both monitoring events in 2022 are included in **Appendix A**.

Analytical data were evaluated in accordance with the Statistical Analysis Plan (NRT/OBG, 2017b) to determine any SSLs of Appendix IV parameters over GWPSs and SSIs of Appendix III parameters greater than background values. SSIs are highlighted in **Table 2**. Statistical background values are provided in **Table 4** and GWPSs in **Table 5**. A flow chart showing the statistical methodology for determination of background values is included as **Appendix B**. A summary of the determination of SSLs in included in **Table 6**. A flow chart showing the statistical methodology for determination of SSLs is included as **Appendix C**.

[1] Sampling was limited to APW07, APW08, APW09, and APW10 during the February 2022 sampling event to confirm SSIs of select Appendix III parameters initially detected at concentrations greater than statistical background values in the preceding sampling event, as allowed by the Statistical Analysis Plan.

Table A. 2021-2022 Monitoring Program Summary

Sampling Dates	Analytical Data Receipt Date	Parameters Collected	SSI(s)/SSL(s)	SSI(s)/SSL(s) Determination Date	ASD Completion Date
November 9-10, 2021	December 8, 2021	Appendix III	Calcium at wells APW07, APW08, APW09, and APW10; Chloride at wells APW07 and APW09; Sulfate at wells APW08, APW09, and APW10; TDS at wells APW09 and APW10	March 8, 2022	NA
February 22-23, 2022 [1]	March 18, 2022	Appendix III [2]	NA	NA	NA
June 14-15, 2022	September 9, 2022	Appendix III Appendix IV	NA	NA	NA
August 15-17, 2022	November 15, 2022	Appendix III Appendix IV Detected [3]	None	January 19, 2023	NA

Notes:

ASD: Alternate Source Demonstration

NA: not applicable

SSI: Statistically Significant Increase

SSL: Statistically Significant Level

TBD: to be determined

[1] Groundwater sample analysis was limited to select Appendix III parameters initially detected at concentrations greater than statistical background values in the preceding sampling event to confirm SSIs, as allowed by the Statistical Analysis Plan.

[2] The February 2022 sampling event was collected to confirm results from the November 2021 sampling event.

[3] Groundwater sample analysis was limited to Appendix IV parameters detected during previous events in accordance with 40 C.F.R. § 257.95(d)(1).

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the Groundwater Monitoring Program during 2022. Groundwater samples were collected and analyzed in accordance with the SAP and all data were accepted.

5. KEY ACTIVITIES PLANNED FOR 2023

The following key activities are planned for 2023:

- Beginning in 2023, the current monitoring well system will be updated to use the same monitoring well network that was proposed for compliance with 35 I.A.C. § 845 which includes all of the monitoring wells used in the 2022 monitoring system. This is a logical step toward aligning the two regulatory programs. The following documents support the expanded monitoring system for 2023:
  - Hydrogeological Site Characterization Report (Ramboll, 2021), which expands upon the hydrogeologic information provided in the Hydrogeologic Monitoring Plan
  - Multi-Site SAP (Ramboll, 2022a)
  - Multi-Site Quality Assurance Project Plan (Ramboll, 2022b)
  - Multi-Site Data Management Plan (Ramboll, 2022c)
  - Multi-Site Statistical Analysis Plan and Certification (Ramboll, 2022d)
  - 40 C.F.R. § 257 Groundwater Monitoring Plan (Ramboll, 2022e), which replaces the monitoring plan provided in the Hydrogeologic Monitoring Plan
  - Monitoring Well Network Certification
- Continuation of the assessment monitoring program with semi-annual sampling scheduled for the first and third quarters of 2023.
- Complete evaluation of analytical data from the compliance wells to determine whether an SSL of Appendix IV parameters above GWPSs has occurred.
- If an SSL is identified, potential alternate sources (*i.e.,* a source other than the CCR unit caused the SSL or that the SSL resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality) will be evaluated.
  - If an alternate source is identified to be the cause of the SSL, a written demonstration will be completed within 90 days of SSL determination and included in the 2023 Annual Groundwater Monitoring and Corrective Action Report.
  - If an alternate source(s) is not identified to be the cause of the SSL, the applicable requirements of 40 C.F.R. §§ 257.94 through 257.98 (*e.g.,* assessment of corrective measures) as may apply in 2023 will be met, including associated recordkeeping/notifications required by 40 C.F.R. §§ 257.105 through 257.108.

6. REFERENCES

Natural Resource Technology, an OBG Company (NRT/OBG), 2017a. Sampling and Analysis Plan, Newton Landfill 2, Newton Power Station, Newton, Illinois, Project No. 2285, Revision 0, October 17, 2017.

Natural Resource Technology, an OBG Company (NRT/OBG), 2017b. Statistical Analysis Plan, Coffeen Power Station, Newton Power Station, Illinois Power Generating Company, October 17, 2017.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2021. Hydrogeological Site Characterization Report, the Primary Ash Pond, Newton Power Plant, Newton, Illinois. October 21, 2021.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022a. Multi-Site Sampling and Analysis Plan. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022b. Multi-Site Quality Assurance Project Plan. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022c. Multi-Site Data Management Plan. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022d. Multi-Site Statistical Analysis Plan, 40 C.F.R. § 257. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022e. 40 C.F.R. § 257 Groundwater Monitoring Plan, the Primary Ash Pond, Newton Power Plant, Newton, Illinois. December 28, 2022.

TABLES

TABLE 1
GROUNDWATER ELEVATIONS
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NEWTON POWER PLANT
501 - PRIMARY ASH POND
NEWTON, IL

Well ID	Monitored Unit	Well Screen Interval (feet BGS)	Well Type	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
APW05	UA	62.64 - 67.44	Background	38.93396	-88.28098	08/02/2021	14.79	529.28
APW05	UA	62.64 - 67.44	Background	38.93396	-88.28098	02/21/2022	14.23	529.84
APW05	UA	62.64 - 67.44	Background	38.93396	-88.28098	08/11/2022	14.45	529.62
APW06	UA	67.67 - 72.48	Background	38.93375	-88.28628	08/02/2021	19.76	526.31
APW06	UA	67.67 - 72.48	Background	38.93375	-88.28628	02/21/2022	19.46	526.61
APW06	UA	67.67 - 72.48	Background	38.93375	-88.28628	08/11/2022	19.62	526.45
APW07	UA	77.89 - 82.7	Compliance	38.92823	-88.29208	08/02/2021	46.10	492.27
APW07	UA	77.89 - 82.7	Compliance	38.92823	-88.29208	02/21/2022	45.99	492.38
APW07	UA	77.89 - 82.7	Compliance	38.92823	-88.29208	08/11/2022	46.48	491.89
APW08	UA	71.4 - 81.06	Compliance	38.92315	-88.29229	08/02/2021	37.38	491.59
APW08	UA	71.4 - 81.06	Compliance	38.92315	-88.29229	02/21/2022	36.73	492.24
APW08	UA	71.4 - 81.06	Compliance	38.92315	-88.29229	08/11/2022	37.30	491.67
APW09	UA	56.66 - 61.46	Compliance	38.92232	-88.28159	08/02/2021	26.75	504.77
APW09	UA	56.66 - 61.46	Compliance	38.92232	-88.28159	02/21/2022	25.74	505.78
APW09	UA	56.66 - 61.46	Compliance	38.92232	-88.28159	08/11/2022	26.24	505.28
APW10	UA	40.74 - 45.54	Compliance	38.92744	-88.27313	08/02/2021	17.88	506.37
APW10	UA	40.74 - 45.54	Compliance	38.92744	-88.27313	02/21/2022	16.92	507.33
APW10	UA	40.74 - 45.54	Compliance	38.92744	-88.27313	08/11/2022	17.32	506.93
APW11	UA	60 - 65	Water Level Only	38.93281	-88.27545	02/21/2022	23.98	514.65
APW13	UA	58.5 - 63.5	Water Level Only	38.92566	-88.27442	02/21/2022	31.46	506.53
APW14	UA	50 - 55	Water Level Only	38.92406	-88.27799	02/21/2022	19.95	506.34
APW15	UA	98 - 103	Water Level Only	38.92159	-88.28523	02/21/2022	21.02	503.67
APW16	UA	80.5 - 85.5	Water Level Only	38.92032	-88.29129	02/21/2022	39.33	491.85
APW17	UA	87 - 92	Water Level Only	38.92592	-88.29393	02/21/2022	40.34	492.18
APW18	UA	75 - 80	Water Level Only	38.93098	-88.29012	02/21/2022	50.93	492.34
G48MG	UA	71.8 - 76.65	Water Level Only	38.93925	-88.29601	08/02/2021	19.18	526.35
G48MG	UA	71.8 - 76.65	Water Level Only	38.93925	-88.29601	02/21/2022	18.94	526.59
G48MG	UA	71.8 - 76.65	Water Level Only	38.93925	-88.29601	08/11/2022	18.97	526.56
G06D	UA	74.23 - 93.89	Water Level Only	38.92723	-88.29650	08/02/2021	28.29	503.37
G06D	UA	74.23 - 93.89	Water Level Only	38.92723	-88.29650	02/21/2022	28.80	502.86
G06D	UA	74.23 - 93.89	Water Level Only	38.92723	-88.29650	08/11/2022	29.17	502.49
G201	UA	57 - 67	Water Level Only	38.93717	-88.29440	08/02/2021	18.32	526.55
G201	UA	57 - 67	Water Level Only	38.93717	-88.29440	02/21/2022	17.79	527.08
G201	UA	57 - 67	Water Level Only	38.93717	-88.29440	08/11/2022	17.39	527.48
G202	UA	64 - 74	Water Level Only	38.93088	-88.29056	02/21/2022	47.10	492.59
G202	UA	64 - 74	Water Level Only	38.93088	-88.29056	08/11/2022	37.14	502.55

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G203	UA	62.5 - 72.5	Water Level Only	38.92860	-88.29222	08/02/2021	41.18	491.95
G203	UA	62.5 - 72.5	Water Level Only	38.92860	-88.29222	02/21/2022	40.54	492.59
G203	UA	62.5 - 72.5	Water Level Only	38.92860	-88.29222	08/11/2022	32.00	501.13
G208	UA	74.93 - 94.71	Water Level Only	38.92963	-88.29818	08/02/2021	25.35	509.68
G208	UA	74.93 - 94.71	Water Level Only	38.92963	-88.29818	02/21/2022	24.83	510.20
G208	UA	74.93 - 94.71	Water Level Only	38.92963	-88.29818	08/11/2022	25.21	509.82
G217D	UA	NA	Water Level Only	38.93217	-88.29008	08/11/2022	19.49	518.43
G220	UA	76.37 - 86.05	Water Level Only	38.92841	-88.29951	08/02/2021	18.17	516.46
G220	UA	76.37 - 86.05	Water Level Only	38.92841	-88.29951	02/21/2022	17.98	516.65
G220	UA	76.37 - 86.05	Water Level Only	38.92841	-88.29951	08/11/2022	17.41	517.22
G222	UA	64.57 - 79.24	Water Level Only	38.92719	-88.29967	08/02/2021	15.23	519.09
G222	UA	64.57 - 79.24	Water Level Only	38.92719	-88.29967	02/21/2022	16.23	518.09
G222	UA	64.57 - 79.24	Water Level Only	38.92719	-88.29967	08/11/2022	15.13	519.19
G223	UA	79.09 - 88.75	Water Level Only	38.93016	-88.29345	08/02/2021	33.07	500.53
G223	UA	79.09 - 88.75	Water Level Only	38.93016	-88.29345	02/21/2022	32.90	500.70
G223	UA	79.09 - 88.75	Water Level Only	38.93016	-88.29345	08/11/2022	32.92	500.68
G224	UA	63.51 - 73.17	Water Level Only	38.93177	-88.29240	08/02/2021	42.36	491.95
G224	UA	63.51 - 73.17	Water Level Only	38.93177	-88.29240	02/21/2022	41.87	492.44
G224	UA	63.51 - 73.17	Water Level Only	38.93177	-88.29240	08/11/2022	42.23	492.08
G230	UA	68.23 - 77.65	Water Level Only	38.93040	-88.29106	08/02/2021	47.79	491.88
G230	UA	68.23 - 77.65	Water Level Only	38.93040	-88.29106	02/21/2022	47.22	492.45
G230	UA	68.23 - 77.65	Water Level Only	38.93040	-88.29106	08/11/2022	47.83	491.84
G231	UA	67.07 - 76.53	Water Level Only	38.92992	-88.29141	08/02/2021	47.15	491.91
G231	UA	67.07 - 76.53	Water Level Only	38.92992	-88.29141	02/21/2022	46.62	492.44
G231	UA	67.07 - 76.53	Water Level Only	38.92992	-88.29141	08/11/2022	47.16	491.90
G232	UA	69.85 - 74.44	Water Level Only	38.92944	-88.29176	08/02/2021	45.55	491.86
G232	UA	69.85 - 74.44	Water Level Only	38.92944	-88.29176	02/21/2022	44.95	492.46
G232	UA	69.85 - 74.44	Water Level Only	38.92944	-88.29176	08/11/2022	45.52	491.89
G233	UA	63.41 - 73.05	Water Level Only	38.92886	-88.29206	08/02/2021	41.48	491.88
G233	UA	63.41 - 73.05	Water Level Only	38.92886	-88.29206	08/11/2022	41.45	491.91

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G234	UA	65.86 - 70.44	Water Level Only	38.92847	-88.29243	08/02/2021	43.00	491.87
G234	UA	65.86 - 70.44	Water Level Only	38.92847	-88.29243	02/21/2022	42.39	492.48
G234	UA	65.86 - 70.44	Water Level Only	38.92847	-88.29243	08/11/2022	43.00	491.87
MW31D	UA	36.07 - 40.75	Water Level Only	38.94521	-88.28039	08/02/2021	9.19	543.72
MW31D	UA	36.07 - 40.75	Water Level Only	38.94521	-88.28039	02/21/2022	7.39	545.52
MW32D	UA	56.75 - 61.23	Water Level Only	38.94323	-88.29297	02/21/2022	16.22	530.51
MW33D	UA	44.91 - 49.52	Water Level Only	38.94150	-88.28875	08/02/2021	12.59	533.76
MW33D	UA	44.91 - 49.52	Water Level Only	38.94150	-88.28875	02/21/2022	12.98	533.37
MW34D	UA	51.07 - 55.67	Water Level Only	38.94131	-88.30143	02/21/2022	11.97	528.20
MW43D	UA	33.54 - 38.07	Water Level Only	38.93941	-88.30382	02/21/2022	6.45	536.39
R201	UA	58.65 - 78.22	Water Level Only	38.93716	-88.29439	08/02/2021	18.37	526.66
R201	UA	58.65 - 78.22	Water Level Only	38.93716	-88.29439	02/21/2022	17.95	NA
R201	UA	58.65 - 78.22	Water Level Only	38.93716	-88.29439	08/11/2022	17.50	NA
R202	UA	68.53 - 78.23	Water Level Only	38.93088	-88.29058	08/02/2021	47.35	492.03
R202	UA	68.53 - 78.23	Water Level Only	38.93088	-88.29058	02/21/2022	46.81	NA
R202	UA	68.53 - 78.23	Water Level Only	38.93088	-88.29058	08/11/2022	47.16	NA
R217D	UA	60.1 - 65.03	Water Level Only	38.93219	-88.29012	08/02/2021	19.62	518.56
R217D	UA	60.1 - 65.03	Water Level Only	38.93219	-88.29012	02/21/2022	19.57	518.61
R217D	UA	60.1 - 65.03	Water Level Only	38.93219	-88.29012	08/11/2022	19.50	518.68
XPW01	CCR	7 - 17	Water Level Only	38.93221	-88.28553	02/21/2022	10.40	541.36
XPW01	CCR	7 - 17	Water Level Only	38.93221	-88.28553	08/11/2022	10.09	541.67
XPW02	CCR	6 - 16	Water Level Only	38.93234	-88.28289	02/21/2022	6.38	548.05
XPW02	CCR	6 - 16	Water Level Only	38.93234	-88.28289	08/11/2022	7.12	547.31
XPW03	CCR	10 - 20	Water Level Only	38.93106	-88.27641	02/21/2022	9.75	543.90
XPW03	CCR	10 - 20	Water Level Only	38.93106	-88.27641	08/11/2022	9.71	543.94
XPW04	CCR	10 - 20	Water Level Only	38.92989	-88.27407	02/21/2022	11.94	542.57
XPW04	CCR	10 - 20	Water Level Only	38.92989	-88.27407	08/11/2022	12.12	542.39
SG02	SW	NA	Water Level Only	38.92123	-88.29206	02/21/2022	-28.91	535.80
SG02	SW	NA	Water Level Only	38.92123	-88.29206	08/11/2022	-29.11	536.00

Notes:
BGS = below ground surface
BMP = below measuring point
NAVD88 = North American Vertical Datum of 1988

NA = not available/not applicable
Monitored Unit Abbreviations:
CCR = coal combustion residuals
SW = surface water
UA = uppermost aquifer

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NEWTON POWER PLANT
501 - PRIMARY ASH POND
NEWTON, IL

Well ID	Well Type	Date	Event ID	Boron, total (mg/L)	Calcium, total (mg/L)	Chloride, total (mg/L)	Fluoride, total (mg/L)	pH (field) (SU)	Sulfate, total (mg/L)	Total Dissolved Solids (mg/L)
Background Value(s)	--	--	--	*0.145*	*66.5*	*58.0*	*0.705*	*6.6/8.0*	*15.0*	*1,000*
APW05	Background	11/10/2021	D9	0.110	54.0	62.0	0.568	7.5	1 U	510
APW05	Background	02/22/2022	D10	0.110	51.0	50.0	0.321	7.7	1 U	470
APW05	Background	06/15/2022	A1	0.140	51.0	45.0	0.04 U	7.5	0.18 U	590
APW05	Background	08/16/2022	A1R	0.280	54.0	46.0	0.389	7.3	0.69 J	580
APW06	Background	11/10/2021	D9	0.100	120	24.0	0.609	7.5	4.40	500
APW06	Background	02/22/2022	D10	0.100	56.0	26.0	0.389	7.6	7.60	450 J
APW06	Background	06/14/2022	A1	0.110	59.0	21.0	0.296	7.5	11.0	560
APW06	Background	08/17/2022	A1R	0.100	56.0	23.0	0.430	7.5	6.10	440
APW07	Compliance	11/09/2021	D9	0.0890	97.0	66.0	0.460	7.4	11.0	600
APW07	Compliance	02/22/2022	D10	0.0880	96.0	67.0	0.458	7.3	11.0	550
APW07	Compliance	06/14/2022	A1	0.110	93.0	64.0	0.04 U	7.4	12.0	530
APW07	Compliance	08/16/2022	A1R	0.200	96.0	63.0	0.289	7.1	12.0	600
APW08	Compliance	11/09/2021	D9	0.0850	100	52.0	0.505	7.4	42.0	620
APW08	Compliance	02/22/2022	D10	0.0900	110	54.0	0.499	7.4	49.0	660
APW08	Compliance	06/14/2022	A1	0.100	110	54.0	0.04 U	7.4	42.0	620
APW08	Compliance	08/16/2022	A1R	0.170	100	56.0	0.325	7.1	44.0	670
APW09	Compliance	11/09/2021	D9	0.120	730	110	0.402	6.7	1,500	3,200
APW09	Compliance	02/22/2022	D10	0.120	82.0	140	0.270	7.7	8.40	820 J
APW09	Compliance	06/15/2022	A1	0.120	82.0	130	0.04 U	7.6	15.0	800
APW09	Compliance	08/17/2022	A1R	0.120	87.0	140	0.388	7.2	9.70	860
APW10	Compliance	11/09/2021	D9	0.0800	150	43.0	0.377	7.4	410	1,100
APW10	Compliance	02/22/2022	D10	0.0910	140	48.0	0.25 U	7.3	410	1,100 J
APW10	Compliance	06/15/2022	A1	0.0900	140	44.0	0.319	7.1	400	1,100
APW10	Compliance	08/17/2022	A1R	0.0890	150	51.0	0.205 J	7.2	440	1,100

Notes:

If an event includes a resample, a statistically significant increase (SSI) is confirmed if both the sample and the resample exceed the background value.
Exceedance of Background
mg/L = milligrams per liter
SU = Standard Units
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate. Lab reports may or may not report both the limit of detection and the limit of quantitation. Limits are provided in the electronic data deliverable. As such, the U-flagged result value provided in this table may not match the result value provided in the lab report.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

TABLE 3
ANALYTICAL RESULTS - APPENDIX IV PARAMETERS
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NEWTON POWER PLANT
501 - PRIMARY ASH POND
NEWTON, IL

Well ID	Well Type	Date	Antimony, total (mg/L)	Arsenic, total (mg/L)	Barium, total (mg/L)	Beryllium, total (mg/L)	Cadmium, total (mg/L)	Chromium, total (mg/L)	Cobalt, total (mg/L)	Fluoride, total (mg/L)	Lead, total (mg/L)	Lithium, total (mg/L)	Mercury, total (mg/L)	Molybdenum, total (mg/L)	Radium 226 + 228 (pCi/L)	Selenium, total (mg/L)	Thallium, total (mg/L)
APW05	Background	06/15/2022	0.00043 U	0.0200	0.250	0.00059 U	0.00074 U	0.0028 U	0.00048 U	0.04 U	0.00022 U	0.005 U	0.00014 U	0.0110	0.634	0.00074 U	0.00038 U
APW05	Background	08/16/2022	--	0.0210	0.260	--	--	0.0028 U	--	0.389	0.00022 U	0.0084 J	0.00014 U	0.0100	0.248	0.00074 U	--
APW06	Background	06/14/2022	0.00043 U	0.00690	0.240	0.00059 U	0.00074 U	0.00440	0.00048 U	0.296	0.00220	0.005 U	0.00014 U	0.00720	0.263	0.00074 U	0.00038 U
APW06	Background	08/17/2022	--	0.00680	0.220	--	--	0.0028 U	--	0.430	0.00049 J	0.012 J	0.00014 U	0.00720	1.12	0.00074 U	--
APW07	Compliance	06/14/2022	0.00043 U	0.0120	0.500	0.00059 U	0.00074 U	0.0028 U	0.00048 U	0.04 U	0.00022 U	0.005 U	0.00014 U	0.00150	1.24	0.00074 U	0.00038 U
APW07	Compliance	08/16/2022	--	0.0120	0.510	--	--	0.0028 U	--	0.289	0.00022 U	0.005 U	0.00014 U	0.00140	1.91	0.00074 U	--
APW08	Compliance	06/14/2022	0.00043 U	0.0190	0.460	0.00059 U	0.00074 U	0.0028 U	0.00048 U	0.04 U	0.00022 U	0.005 U	0.00014 U	0.00380	1.06	0.00074 U	0.00038 U
APW08	Compliance	08/16/2022	--	0.0220	0.490	--	--	0.0028 U	--	0.325	0.00022 U	0.005 U	0.00014 U	0.00370	2.28 J	0.00074 U	--
APW09	Compliance	06/15/2022	0.00043 U	0.0270	0.470	0.00059 U	0.00074 U	0.00650	0.00048 U	0.04 U	0.00022 U	0.005 U	0.00610	0.00480	1.01	0.0420	0.00038 U
APW09	Compliance	08/17/2022	--	0.0270	0.440	--	--	0.00830	--	0.388	0.00690	0.01 J	0.00014 U	0.00370	9.42	0.00074 U	--
APW10	Compliance	06/15/2022	0.00043 U	0.00880	0.0260	0.00059 U	0.00074 U	0.0028 U	0.00048 U	0.319	0.00022 U	0.0200	0.00014 U	0.00710	0.264 J	0.00074 U	0.00038 U
APW10	Compliance	08/17/2022	--	0.00890	0.0380	--	--	0.0031 J	--	0.205 J	0.00130	0.0220	0.00014 U	0.00700	0.289	0.00074 U	--

Notes:
mg/L = milligrams per liter
pCi/L = picoCuries per liter
– = not analyzed
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate. Lab reports may or may not report both the limit of detection and the limit of quantitation. Limits are provided in the electronic data deliverable. As such, the U-flagged result value provided in this table may not match the result value provided in the lab report.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

TABLE 4
STATISTICAL BACKGROUND VALUES
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NEWTON POWER PLANT
501 - PRIMARY ASH POND
NEWTON, IL

Parameter	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Statistical Background Value (LPL/UPL)
Boron (mg/L)	12/15/2015 - 06/13/2017	16	0	Parametric UPL (log-transformed)	0.145
Calcium (mg/L)	12/15/2015 - 06/13/2017	16	0	Parametric UPL (log-transformed)	66.5
Chloride (mg/L)	12/15/2015 - 06/13/2017	16	0	Non-parametric UPL	58.0
Fluoride (mg/L)	12/15/2015 - 06/13/2017	16	0	Parametric UPL	0.705
pH (field) (SU)	12/15/2015 - 06/13/2017	16	0	Parametric LPL/UPL	6.6/8.0
Sulfate (mg/L)	12/15/2015 - 06/13/2017	16	38	Non-parametric UPL	15.0
Total Dissolved Solids (mg/L)	12/15/2015 - 06/13/2017	16	0	Non-parametric UPL	1,000

Notes:
LPL = lower prediction limit (applicable for pH only)
mg/L = milligrams per liter
SU = standard units
UPL = upper prediction limit

TABLE 5
GROUNDWATER PROTECTION STANDARDS
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NEWTON POWER PLANT
501 - PRIMARY ASH POND
NEWTON, IL

Parameter	Background					MCL/HBL	Groundwater Protection Standard*	Groundwater Protection Standard Source
	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Value			
Antimony (mg/L)	12/15/2015 - 06/13/2017	16	100	All ND - Last Reporting Limit	0.003	0.006	0.006	MCL/HBL
Arsenic (mg/L)	12/15/2015 - 06/13/2017	16	0	Parametric UTL	0.0274	0.010	0.0274	Background
Barium (mg/L)	12/15/2015 - 06/13/2017	16	0	Parametric UTL	0.257	2	2	MCL/HBL
Beryllium (mg/L)	12/15/2015 - 06/13/2017	16	94	Non-parametric UTL	0.00250	0.004	0.004	MCL/HBL
Cadmium (mg/L)	12/15/2015 - 06/13/2017	16	88	Non-parametric UTL	0.00170	0.005	0.005	MCL/HBL
Chromium (mg/L)	12/15/2015 - 06/13/2017	16	94	Non-parametric UTL	0.00400	0.1	0.1	MCL/HBL
Cobalt (mg/L)	12/15/2015 - 06/13/2017	16	94	Non-parametric UTL	0.00200	0.006	0.006	MCL/HBL
Fluoride (mg/L)	12/15/2015 - 06/13/2017	16	0	Parametric UTL	0.744	4.0	4.0	MCL/HBL
Lead (mg/L)	12/15/2015 - 06/13/2017	16	56	Non-parametric UTL	0.00250	0.015	0.015	MCL/HBL
Lithium (mg/L)	12/15/2015 - 06/13/2017	16	0	Parametric UTL	0.0233	0.04	0.04	MCL/HBL
Mercury (mg/L)	12/15/2015 - 06/13/2017	16	81	Non-parametric UTL	0.00200	0.002	0.002	MCL/HBL
Molybdenum (mg/L)	12/15/2015 - 06/13/2017	16	0	Parametric UTL	0.0382	0.1	0.1	MCL/HBL
Radium 226 + Radium 228 (pCi/L)	12/15/2015 - 06/13/2017	16	0	Parametric UTL	1.54	5	5	MCL/HBL
Selenium (mg/L)	12/15/2015 - 06/13/2017	16	81	Non-parametric UTL	0.00600	0.05	0.05	MCL/HBL
Thallium (mg/L)	12/15/2015 - 06/13/2017	16	88	Non-parametric UTL	0.00250	0.002	0.00250	Background

Notes:
* Groundwater Protection Standard is the higher of the MCL/HBL or background.
MCL/HBL = maximum contaminant level/health-based level
mg/L = milligrams per liter
ND = non-detect
pCi/L = picoCuries per liter
UTL = upper tolerance limit

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NEWTON POWER PLANT
501 - PRIMARY ASH POND
NEWTON, IL

Sample Location	Constituent	Result Unit	Event	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Statistical Result	GWPS	GWPS Source
APW07	Antimony, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00043	0.006	MCL/HBL
APW07	Arsenic, total	mg/L	A1	12/15/2015 - 06/14/2022	9	0	CB around linear reg	0.00815	0.0274	Background
APW07	Arsenic, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	0	CB around linear reg	0.00948	0.0274	Background
APW07	Barium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	0	CB around linear reg	0.377	2	MCL/HBL
APW07	Barium, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	0	CB around linear reg	0.423	2	MCL/HBL
APW07	Beryllium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00059	0.004	MCL/HBL
APW07	Cadmium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00074	0.005	MCL/HBL
APW07	Chromium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	89	CI around median	0.00400	0.1	MCL/HBL
APW07	Chromium, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	90	CI around median	0.00280	0.1	MCL/HBL
APW07	Cobalt, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00048	0.006	MCL/HBL
APW07	Fluoride, total	mg/L	A1	12/15/2015 - 06/14/2022	19	5	CI around mean	0.360	4.0	MCL/HBL
APW07	Fluoride, total	mg/L	A1R	12/15/2015 - 08/16/2022	20	5	CI around mean	0.354	4.0	MCL/HBL
APW07	Lead, total	mg/L	A1	12/15/2015 - 06/14/2022	9	67	CI around median	0.00100	0.015	MCL/HBL
APW07	Lead, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	70	CI around median	0.000220	0.015	MCL/HBL
APW07	Lithium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.005	0.04	MCL/HBL
APW07	Lithium, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	100	All ND - Last	0.005	0.04	MCL/HBL
APW07	Mercury, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00014	0.002	MCL/HBL
APW07	Mercury, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	100	All ND - Last	0.00014	0.002	MCL/HBL
APW07	Molybdenum, total	mg/L	A1	12/15/2015 - 06/14/2022	9	0	CB around linear reg	-0.00997	0.1	MCL/HBL
APW07	Molybdenum, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	0	CB around linear reg	-0.00600	0.1	MCL/HBL
APW07	Radium 226 + Radium 228, total	pCi/L	A1	12/15/2015 - 06/14/2022	9	0	CI around mean	1.26	5	MCL/HBL
APW07	Radium 226 + Radium 228, total	pCi/L	A1R	12/15/2015 - 08/16/2022	10	0	CI around mean	1.34	5	MCL/HBL
APW07	Selenium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00074	0.05	MCL/HBL
APW07	Selenium, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	100	All ND - Last	0.00074	0.05	MCL/HBL
APW07	Thallium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00038	0.00250	Background
APW08	Antimony, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00043	0.006	MCL/HBL
APW08	Arsenic, total	mg/L	A1	12/15/2015 - 06/14/2022	9	0	CB around linear reg	0.00927	0.0274	Background
APW08	Arsenic, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	0	CB around linear reg	0.0140	0.0274	Background
APW08	Barium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	0	CB around linear reg	0.361	2	MCL/HBL

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NEWTON POWER PLANT
501 - PRIMARY ASH POND
NEWTON, IL

Sample Location	Constituent	Result Unit	Event	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Statistical Result	GWPS	GWPS Source
APW08	Barium, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	0	CB around linear reg	0.409	2	MCL/HBL
APW08	Beryllium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00059	0.004	MCL/HBL
APW08	Cadmium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00074	0.005	MCL/HBL
APW08	Chromium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	56	CI around median	0.00400	0.1	MCL/HBL
APW08	Chromium, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	60	CI around median	0.00280	0.1	MCL/HBL
APW08	Cobalt, total	mg/L	A1	12/15/2015 - 06/14/2022	9	78	CI around median	0.00200	0.006	MCL/HBL
APW08	Fluoride, total	mg/L	A1	12/15/2015 - 06/14/2022	19	11	CI around median	0.373	4.0	MCL/HBL
APW08	Fluoride, total	mg/L	A1R	12/15/2015 - 08/16/2022	20	10	CI around median	0.337	4.0	MCL/HBL
APW08	Lead, total	mg/L	A1	12/15/2015 - 06/14/2022	9	44	CI around geomean	0.000905	0.015	MCL/HBL
APW08	Lead, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	50	CI around median	0.000220	0.015	MCL/HBL
APW08	Lithium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	56	CI around median	0.0100	0.04	MCL/HBL
APW08	Lithium, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	60	CI around median	0.00500	0.04	MCL/HBL
APW08	Mercury, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00014	0.002	MCL/HBL
APW08	Mercury, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	100	All ND - Last	0.00014	0.002	MCL/HBL
APW08	Molybdenum, total	mg/L	A1	12/15/2015 - 06/14/2022	9	0	CI around mean	0.00484	0.1	MCL/HBL
APW08	Molybdenum, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	0	CI around mean	0.00457	0.1	MCL/HBL
APW08	Radium 226 + Radium 228, total	pCi/L	A1	12/15/2015 - 06/14/2022	9	0	CI around mean	0.835	5	MCL/HBL
APW08	Radium 226 + Radium 228, total	pCi/L	A1R	12/15/2015 - 08/16/2022	10	0	CI around mean	0.952	5	MCL/HBL
APW08	Selenium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	89	CI around median	0.00100	0.05	MCL/HBL
APW08	Selenium, total	mg/L	A1R	12/15/2015 - 08/16/2022	10	90	CI around median	0.000740	0.05	MCL/HBL
APW08	Thallium, total	mg/L	A1	12/15/2015 - 06/14/2022	9	100	All ND - Last	0.00038	0.00250	Background
APW09	Antimony, total	mg/L	A1	12/15/2015 - 06/15/2022	9	100	All ND - Last	0.00043	0.006	MCL/HBL
APW09	Arsenic, total	mg/L	A1	12/15/2015 - 06/15/2022	9	0	CI around mean	0.00598	0.0274	Background
APW09	Arsenic, total	mg/L	A1R	12/15/2015 - 08/17/2022	10	0	CI around mean	0.00714	0.0274	Background
APW09	Barium, total	mg/L	A1	12/15/2015 - 06/15/2022	9	0	CI around mean	0.222	2	MCL/HBL
APW09	Barium, total	mg/L	A1R	12/15/2015 - 08/17/2022	10	0	CI around mean	0.244	2	MCL/HBL
APW09	Beryllium, total	mg/L	A1	12/15/2015 - 06/15/2022	9	100	All ND - Last	0.00059	0.004	MCL/HBL
APW09	Cadmium, total	mg/L	A1	12/15/2015 - 06/15/2022	9	100	All ND - Last	0.00074	0.005	MCL/HBL
APW09	Chromium, total	mg/L	A1	12/15/2015 - 06/15/2022	9	89	CI around median	0.00400	0.1	MCL/HBL

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NEWTON POWER PLANT
501 - PRIMARY ASH POND
NEWTON, IL

Sample Location	Constituent	Result Unit	Event	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Statistical Result	GWPS	GWPS Source
APW09	Chromium, total	mg/L	A1R	12/15/2015 - 08/17/2022	10	80	CI around median	0.00400	0.1	MCL/HBL
APW09	Cobalt, total	mg/L	A1	12/15/2015 - 06/15/2022	9	100	All ND - Last	0.00048	0.006	MCL/HBL
APW09	Fluoride, total	mg/L	A1	12/15/2015 - 06/15/2022	20	5	CI around mean	0.449	4.0	MCL/HBL
APW09	Fluoride, total	mg/L	A1R	12/15/2015 - 08/17/2022	21	5	CI around mean	0.445	4.0	MCL/HBL
APW09	Lead, total	mg/L	A1	12/15/2015 - 06/15/2022	9	67	CI around median	0.00100	0.015	MCL/HBL
APW09	Lead, total	mg/L	A1R	12/15/2015 - 08/17/2022	10	60	CI around median	0.00100	0.015	MCL/HBL
APW09	Lithium, total	mg/L	A1	12/15/2015 - 06/15/2022	9	100	All ND - Last	0.005	0.04	MCL/HBL
APW09	Lithium, total	mg/L	A1R	12/15/2015 - 08/17/2022	10	100	All ND - Last	0.01	0.04	MCL/HBL
APW09	Mercury, total	mg/L	A1	12/15/2015 - 06/15/2022	9	78	CI around median	0.000200	0.002	MCL/HBL
APW09	Mercury, total	mg/L	A1R	12/15/2015 - 08/17/2022	10	80	CI around median	0.000200	0.002	MCL/HBL
APW09	Molybdenum, total	mg/L	A1	12/15/2015 - 06/15/2022	9	0	CB around linear reg	-0.0183	0.1	MCL/HBL
APW09	Molybdenum, total	mg/L	A1R	12/15/2015 - 08/17/2022	10	0	CB around linear reg	-0.0107	0.1	MCL/HBL
APW09	Radium 226 + Radium 228, total	pCi/L	A1	12/15/2015 - 06/15/2022	9	0	CI around mean	1.01	5	MCL/HBL
APW09	Radium 226 + Radium 228, total	pCi/L	A1R	12/15/2015 - 08/17/2022	10	0	CI around median	1.01	5	MCL/HBL
APW09	Selenium, total	mg/L	A1	12/15/2015 - 06/15/2022	9	89	CI around median	0.00100	0.05	MCL/HBL
APW09	Selenium, total	mg/L	A1R	12/15/2015 - 08/17/2022	10	90	CI around median	0.00100	0.05	MCL/HBL
APW09	Thallium, total	mg/L	A1	12/15/2015 - 06/15/2022	9	100	All ND - Last	0.00038	0.00250	Background
APW10	Antimony, total	mg/L	A1	12/16/2015 - 06/15/2022	9	100	All ND - Last	0.00043	0.006	MCL/HBL
APW10	Arsenic, total	mg/L	A1	12/16/2015 - 06/15/2022	9	0	CI around mean	0.00464	0.0274	Background
APW10	Arsenic, total	mg/L	A1R	12/16/2015 - 08/17/2022	10	0	CI around median	0.00350	0.0274	Background
APW10	Barium, total	mg/L	A1	12/16/2015 - 06/15/2022	9	0	CB around linear reg	0.00979	2	MCL/HBL
APW10	Barium, total	mg/L	A1R	12/16/2015 - 08/17/2022	10	0	CI around mean	0.0304	2	MCL/HBL
APW10	Beryllium, total	mg/L	A1	12/16/2015 - 06/15/2022	9	100	All ND - Last	0.00059	0.004	MCL/HBL
APW10	Cadmium, total	mg/L	A1	12/16/2015 - 06/15/2022	9	100	All ND - Last	0.00074	0.005	MCL/HBL
APW10	Chromium, total	mg/L	A1	12/16/2015 - 06/15/2022	9	100	All ND - Last	0.0028	0.1	MCL/HBL
APW10	Chromium, total	mg/L	A1R	12/16/2015 - 08/17/2022	10	100	All ND - Last	0.0031	0.1	MCL/HBL
APW10	Cobalt, total	mg/L	A1	12/16/2015 - 06/15/2022	9	100	All ND - Last	0.00048	0.006	MCL/HBL
APW10	Fluoride, total	mg/L	A1	12/16/2015 - 06/15/2022	19	16	CI around mean	0.295	4.0	MCL/HBL
APW10	Fluoride, total	mg/L	A1R	12/16/2015 - 08/17/2022	20	20	CI around mean	0.292	4.0	MCL/HBL

TABLE 6
DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
NEWTON POWER PLANT
501 - PRIMARY ASH POND
NEWTON, IL

Sample Location	Constituent	Result Unit	Event	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Statistical Result	GWPS	GWPS Source
APW10	Lead, total	mg/L	A1	12/16/2015 - 06/15/2022	9	100	All ND - Last	0.00022	0.015	MCL/HBL
APW10	Lead, total	mg/L	A1R	12/16/2015 - 08/17/2022	10	90	CI around median	0.00100	0.015	MCL/HBL
APW10	Lithium, total	mg/L	A1	12/16/2015 - 06/15/2022	9	0	CI around mean	0.0216	0.04	MCL/HBL
APW10	Lithium, total	mg/L	A1R	12/16/2015 - 08/17/2022	10	0	CI around mean	0.0216	0.04	MCL/HBL
APW10	Mercury, total	mg/L	A1	12/16/2015 - 06/15/2022	9	100	All ND - Last	0.00014	0.002	MCL/HBL
APW10	Mercury, total	mg/L	A1R	12/16/2015 - 08/17/2022	10	100	All ND - Last	0.00014	0.002	MCL/HBL
APW10	Molybdenum, total	mg/L	A1	12/16/2015 - 06/15/2022	9	0	CB around linear reg	0.00341	0.1	MCL/HBL
APW10	Molybdenum, total	mg/L	A1R	12/16/2015 - 08/17/2022	10	0	CB around linear reg	0.00465	0.1	MCL/HBL
APW10	Radium 226 + Radium 228, total	pCi/L	A1	12/16/2015 - 06/15/2022	9	0	CI around mean	0.418	5	MCL/HBL
APW10	Radium 226 + Radium 228, total	pCi/L	A1R	12/16/2015 - 08/17/2022	10	0	CI around mean	0.314	5	MCL/HBL
APW10	Selenium, total	mg/L	A1	12/16/2015 - 06/15/2022	9	100	All ND - Last	0.00074	0.05	MCL/HBL
APW10	Selenium, total	mg/L	A1R	12/16/2015 - 08/17/2022	10	100	All ND - Last	0.00074	0.05	MCL/HBL
APW10	Thallium, total	mg/L	A1	12/16/2015 - 06/15/2022	9	100	All ND - Last	0.00038	0.00250	Background

Notes:
mg/L = milligrams per liter
pCi/L = picocuries per liter
Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result
Statistical Calculation = method used to calculate the statistical result:

All ND - Last = All results were below the reporting limit, and the last determined reporting limit is shown

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

Statistical Result = calculated in accordance with Statistical Analysis Plan using constituent concentrations observed at monitoring well during all sampling events within the specified date range
GWPS = Groundwater Protection Standard
GWPS Source:

MCL/HBL = maximum contaminant level/health-based level

Background = background concentration

FIGURES

- BACKGROUND WELL
- COMPLIANCE WELL
- SOURCE SAMPLE LOCATION
- 40 C.F.R. § 257 REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE

0 400 800
Feet

MONITORING WELL LOCATION MAP

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
PRIMARY ASH POND
NEWTON POWER PLANT
NEWTON, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

BACKGROUND WELL
COMPLIANCE WELL
PORE WATER WELL
MONITORING WELL
STAFF GAGE, CCR UNIT
STAFF GAGE, RIVER
GROUNDWATER ELEVATION CONTOUR (5-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
40 C.F.R. § 257 REGULATED UNIT (SUBJECT UNIT)
SITE FEATURE

NOTES:
1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. NM = NOT MEASURED
3. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

0 400 800
Feet

POTENTIOMETRIC SURFACE MAP NOVEMBER 8, 2021

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
PRIMARY ASH POND
NEWTON POWER PLANT
NEWTON, ILLINOIS

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2021\Newton\PAP_501\NEW PAP GWE Contours D9A4D 20211108_.mxd
PROJECT: 169000XXXX | DATED: 4/29/2022 | DESIGNER: galarmmc

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, LAKE
- GROUNDWATER ELEVATION CONTOUR (5-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- 40 C.F.R. § 257 REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE

NOTES:

1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.

2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

0 400 800 Feet

POTENTIOMETRIC SURFACE MAP MAY 23, 2022

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
PRIMARY ASH POND
NEWTON POWER PLANT
NEWTON, ILLINOIS

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2022\Newton\PAP_501\NEW PAP 501 Pot Surface 20220523.mxd
PROJECT: 169000XXXX | DATED: 1/10/2023 | DESIGNER: galarnmc

- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- PORE WATER WELL
- MONITORING WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, LAKE
- GROUNDWATER ELEVATION CONTOUR (5-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- 40 C.F.R. § 257 REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE

NOTES:
1.ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

0 400 800
Feet

POTENTIOMETRIC SURFACE MAP AUGUST 11, 2022

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
PRIMARY ASH POND
NEWTON POWER PLANT
NEWTON, ILLINOIS

FIGURE 4

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

PROJECT: 169000XXXX | DATED: 1/3/2023 | DESIGNER: galarmnc

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2022\Newton\PAP_501\NEW PAP 501 Pot Surface 20220811.mxd

APPENDICES

APPENDIX A
LABORATORY REPORTS

December 08, 2021

Steve Wiskes
Ramboll - Milwaukee
234 W Florida Street, 5th Floor
Milwaukee, WI 53204

Dear Steve Wiskes:

Please find enclosed the analytical results for the sample(s) the laboratory received. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

PDC Laboratories. appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lgrant@pdclab.com.

Sincerely,

David J Schindler

Project Manager
(309) 692-9688 x1716
gschindler@pdclab.com

SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order EK02071

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
NO	Current PDC COC submitted
NO	Case narrative provided

ANALYTICAL RESULTS

Sample: EK02071-01
Name: APW7
Matrix: Ground Water - Grab

Sampled: 11/09/21 09:50
Received: 11/09/21 20:24
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	66	mg/L		11/19/21 21:20	10	10	11/19/21 21:20	CRD	EPA 300.0 REV 2.1
Sulfate	11	mg/L		11/19/21 21:20	10	10	11/19/21 21:20	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	46.71	Feet		11/09/21 09:50	1		11/09/21 09:50	FIELD	Field
Dissolved oxygen, Field	0.51	mg/L		11/09/21 09:50	1		11/09/21 09:50	FIELD	Field
Oxidation Reduction Potential	-90.5	mV		11/09/21 09:50	1	-500	11/09/21 09:50	FIELD	Field
pH, Field Measured	7.36	pH Units		11/09/21 09:50	1		11/09/21 09:50	FIELD	Field
Specific Conductance, Field Measured	925.3	umhos/cm		11/09/21 09:50	1		11/09/21 09:50	FIELD	Field
Temperature, Field Measured	14.0	°C		11/09/21 09:50	1		11/09/21 09:50	FIELD	Field
Turbidity, Field Measured	109	NTU		11/09/21 09:50	1	0.00	11/09/21 09:50	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	460	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Fluoride	0.460	mg/L		11/29/21 14:08	1	0.250	11/29/21 14:08	TTH	SM 4500F C 1997
Solids - total dissolved solids (TDS)	600	mg/L		11/12/21 09:31	1	26	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	89	ug/L		11/16/21 12:23	5	10	11/22/21 11:27	JMW	EPA 6020A
Calcium	97	mg/L		11/16/21 12:23	5	0.15	11/22/21 11:27	JMW	EPA 6020A
Magnesium	37	mg/L		11/16/21 12:23	5	0.10	11/22/21 11:27	JMW	EPA 6020A
Potassium	1.6	mg/L		11/16/21 12:23	5	0.10	11/22/21 11:27	JMW	EPA 6020A
Sodium	91	mg/L		11/16/21 12:23	5	0.10	11/22/21 11:27	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: EK02071-02
Name: APW7 DUPLICATE
Matrix: Ground Water - Field Duplicate

Sampled: 11/09/21 09:50
Received: 11/09/21 20:24
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	62	mg/L		11/19/21 21:56	10	10	11/19/21 21:56	CRD	EPA 300.0 REV 2.1
Sulfate	11	mg/L		11/19/21 21:56	10	10	11/19/21 21:56	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	46.71	Feet		11/09/21 09:50	1		11/09/21 09:50	FIELD	Field
Dissolved oxygen, Field	0.51	mg/L		11/09/21 09:50	1		11/09/21 09:50	FIELD	Field
Oxidation Reduction Potential	-90.5	mV		11/09/21 09:50	1	-500	11/09/21 09:50	FIELD	Field
pH, Field Measured	7.36	pH Units		11/09/21 09:50	1		11/09/21 09:50	FIELD	Field
Specific Conductance, Field Measured	925.3	umhos/cm		11/09/21 09:50	1		11/09/21 09:50	FIELD	Field
Temperature, Field Measured	14.0	°C		11/09/21 09:50	1		11/09/21 09:50	FIELD	Field
Turbidity, Field Measured	109	NTU		11/09/21 09:50	1	0.00	11/09/21 09:50	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	460	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Fluoride	0.456	mg/L		11/29/21 14:09	1	0.250	11/29/21 14:09	TTH	SM 4500F C 1997
Solids - total dissolved solids (TDS)	570	mg/L		11/12/21 09:31	1	26	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	89	ug/L		11/16/21 12:23	5	10	11/22/21 11:30	JMW	EPA 6020A
Calcium	100	mg/L		11/16/21 12:23	5	0.15	11/22/21 11:30	JMW	EPA 6020A
Magnesium	39	mg/L		11/16/21 12:23	5	0.10	11/22/21 11:30	JMW	EPA 6020A
Potassium	1.7	mg/L		11/16/21 12:23	5	0.10	11/22/21 11:30	JMW	EPA 6020A
Sodium	94	mg/L		11/16/21 12:23	5	0.10	11/22/21 11:30	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: EK02071-03
Name: APW8
Matrix: Ground Water - Grab

Sampled: 11/09/21 11:21
Received: 11/09/21 20:24
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	52	mg/L		11/19/21 23:09	10	10	11/19/21 23:09	CRD	EPA 300.0 REV 2.1
Sulfate	42	mg/L		11/19/21 23:09	10	10	11/19/21 23:09	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	37.53	Feet		11/09/21 11:21	1		11/09/21 11:21	FIELD	Field
Dissolved oxygen, Field	2.6	mg/L		11/09/21 11:21	1		11/09/21 11:21	FIELD	Field
Oxidation Reduction Potential	-99.2	mV		11/09/21 11:21	1	-500	11/09/21 11:21	FIELD	Field
pH, Field Measured	7.45	pH Units		11/09/21 11:21	1		11/09/21 11:21	FIELD	Field
Specific Conductance, Field Measured	1123	umhos/cm		11/09/21 11:21	1		11/09/21 11:21	FIELD	Field
Temperature, Field Measured	15.7	°C		11/09/21 11:21	1		11/09/21 11:21	FIELD	Field
Turbidity, Field Measured	12.2	NTU		11/09/21 11:21	1	0.00	11/09/21 11:21	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	500	mg/L		11/17/21 10:22	1	10	11/17/21 10:22	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		11/17/21 10:22	1	10	11/17/21 10:22	JAA	SM 2320B 1997
Fluoride	0.505	mg/L		11/29/21 14:11	1	0.250	11/29/21 14:11	TTH	SM 4500F C 1997
Solids - total dissolved solids (TDS)	620	mg/L		11/12/21 09:31	1	26	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	85	ug/L		11/16/21 12:23	5	10	11/22/21 11:34	JMW	EPA 6020A
Calcium	100	mg/L		11/16/21 12:23	5	0.15	11/22/21 11:34	JMW	EPA 6020A
Magnesium	42	mg/L		11/16/21 12:23	5	0.10	11/22/21 11:34	JMW	EPA 6020A
Potassium	1.6	mg/L		11/16/21 12:23	5	0.10	11/22/21 11:34	JMW	EPA 6020A
Sodium	86	mg/L		11/16/21 12:23	5	0.10	11/22/21 11:34	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: EK02071-04
Name: APW9
Matrix: Ground Water - Grab

Sampled: 11/09/21 12:29
Received: 11/09/21 20:24
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	110	mg/L		11/20/21 00:03	25	25	11/20/21 00:03	CRD	EPA 300.0 REV 2.1
Sulfate	1500	mg/L		11/22/21 15:33	250	250	11/22/21 15:33	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	27.12	Feet		11/09/21 12:29	1		11/09/21 12:29	FIELD	Field
Dissolved oxygen, Field	4.2	mg/L		11/09/21 12:29	1		11/09/21 12:29	FIELD	Field
Oxidation Reduction Potential	52.1	mV		11/09/21 12:29	1	-500	11/09/21 12:29	FIELD	Field
pH, Field Measured	6.73	pH Units		11/09/21 12:29	1		11/09/21 12:29	FIELD	Field
Specific Conductance, Field Measured	5541	umhos/cm		11/09/21 12:29	1		11/09/21 12:29	FIELD	Field
Temperature, Field Measured	18.0	°C		11/09/21 12:29	1		11/09/21 12:29	FIELD	Field
Turbidity, Field Measured	61.4	NTU		11/09/21 12:29	1	0.00	11/09/21 12:29	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	590	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Fluoride	0.402	mg/L		11/29/21 14:12	1	0.250	11/29/21 14:12	TTH	SM 4500F C 1997
Solids - total dissolved solids (TDS)	3200	mg/L		11/12/21 09:31	1	26	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	120	ug/L		11/23/21 15:21	5	10	11/29/21 08:36	JMW	EPA 6020A
Calcium	730	mg/L		11/23/21 15:21	100	3.0	12/01/21 07:29	JMW	EPA 6020A
Magnesium	180	mg/L		11/23/21 15:21	5	0.10	11/29/21 08:36	JMW	EPA 6020A
Potassium	7.1	mg/L		11/23/21 15:21	5	0.10	11/29/21 08:36	JMW	EPA 6020A
Sodium	180	mg/L		11/23/21 15:21	5	0.10	11/29/21 08:36	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: EK02071-05
Name: APW10
Matrix: Ground Water - Grab

Sampled: 11/09/21 14:24
Received: 11/09/21 20:24
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	43	mg/L		11/20/21 00:40	10	10	11/20/21 00:40	CRD	EPA 300.0 REV 2.1
Sulfate	410	mg/L		11/20/21 00:58	50	50	11/20/21 00:58	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	18.46	Feet		11/09/21 14:24	1		11/09/21 14:24	FIELD	Field
Dissolved oxygen, Field	1.8	mg/L		11/09/21 14:24	1		11/09/21 14:24	FIELD	Field
Oxidation Reduction Potential	34.3	mV		11/09/21 14:24	1	-500	11/09/21 14:24	FIELD	Field
pH, Field Measured	7.36	pH Units		11/09/21 14:24	1		11/09/21 14:24	FIELD	Field
Specific Conductance, Field Measured	1567	umhos/cm		11/09/21 14:24	1		11/09/21 14:24	FIELD	Field
Temperature, Field Measured	14.9	°C		11/09/21 14:24	1		11/09/21 14:24	FIELD	Field
Turbidity, Field Measured	< 0.00	NTU		11/09/21 14:24	1	0.00	11/09/21 14:24	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	410	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Fluoride	0.377	mg/L		11/29/21 14:13	1	0.250	11/29/21 14:13	TTH	SM 4500F C 1997
Solids - total dissolved solids (TDS)	1100	mg/L		11/12/21 09:31	1	26	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	80	ug/L		11/18/21 08:26	5	10	11/22/21 13:40	JMW	EPA 6020A
Calcium	150	mg/L		11/18/21 08:26	5	0.15	11/22/21 13:40	JMW	EPA 6020A
Magnesium	70	mg/L		11/18/21 08:26	5	0.10	11/22/21 13:40	JMW	EPA 6020A
Potassium	1.4	mg/L		11/18/21 08:26	5	0.10	11/22/21 13:40	JMW	EPA 6020A
Sodium	120	mg/L		11/18/21 08:26	5	0.10	11/22/21 13:40	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: EK02561-01
Name: APW5
Matrix: Ground Water - Grab

Sampled: 11/10/21 11:55
Received: 11/11/21 12:34
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	62	mg/L	Q4	11/22/21 10:39	50	50	11/22/21 10:39	CRD	EPA 300.0 REV 2.1
Fluoride	0.568	mg/L		11/22/21 09:45	1	0.250	11/22/21 09:45	CRD	EPA 300.0 REV 2.1
Sulfate	< 1.0	mg/L		11/22/21 09:45	1	1.0	11/22/21 09:45	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	14.76	Feet		11/10/21 11:55	1		11/10/21 11:55	FIELD	Field
Dissolved oxygen, Field	0.24	mg/L		11/10/21 11:55	1		11/10/21 11:55	FIELD	Field
Oxidation Reduction Potential	-114	mV		11/10/21 11:55	1	-500	11/10/21 11:55	FIELD	Field
pH, Field Measured	7.54	pH Units		11/10/21 11:55	1		11/10/21 11:55	FIELD	Field
Specific Conductance, Field Measured	984.0	umhos/cm		11/10/21 11:55	1		11/10/21 11:55	FIELD	Field
Temperature, Field Measured	16.7	°C		11/10/21 11:55	1		11/10/21 11:55	FIELD	Field
Turbidity, Field Measured	< 0.00	NTU		11/10/21 11:55	1	0.00	11/10/21 11:55	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	450	mg/L	M	11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L	M	11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	510	mg/L	M	11/12/21 09:31	1	26	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	110	ug/L		11/18/21 08:26	5	10	11/22/21 12:48	JMW	EPA 6020A
Calcium	54	mg/L		11/18/21 08:26	5	0.15	11/22/21 12:48	JMW	EPA 6020A
Magnesium	29	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:48	JMW	EPA 6020A
Potassium	1.5	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:48	JMW	EPA 6020A
Sodium	130	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:48	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: EK02561-02
Name: APW6
Matrix: Ground Water - Grab

Sampled: 11/10/21 10:51
Received: 11/11/21 12:34
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	24	mg/L	Q4	11/22/21 11:51	10	10	11/22/21 11:51	CRD	EPA 300.0 REV 2.1
Fluoride	0.609	mg/L		11/22/21 10:57	1	0.250	11/22/21 10:57	CRD	EPA 300.0 REV 2.1
Sulfate	4.4	mg/L		11/22/21 10:57	1	1.0	11/22/21 10:57	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	19.95	Feet		11/10/21 10:51	1		11/10/21 10:51	FIELD	Field
Dissolved oxygen, Field	0.43	mg/L		11/10/21 10:51	1		11/10/21 10:51	FIELD	Field
Oxidation Reduction Potential	-131	mV		11/10/21 10:51	1	-500	11/10/21 10:51	FIELD	Field
pH, Field Measured	7.52	pH Units		11/10/21 10:51	1		11/10/21 10:51	FIELD	Field
Specific Conductance, Field Measured	909.4	umhos/cm		11/10/21 10:51	1		11/10/21 10:51	FIELD	Field
Temperature, Field Measured	16.8	°C		11/10/21 10:51	1		11/10/21 10:51	FIELD	Field
Turbidity, Field Measured	1020	NTU		11/10/21 10:51	1	0.00	11/10/21 10:51	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	450	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	500	mg/L		11/12/21 09:31	1	26	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	100	ug/L		11/18/21 08:26	5	10	11/22/21 12:51	JMW	EPA 6020A
Calcium	120	mg/L		11/18/21 08:26	5	0.15	11/22/21 12:51	JMW	EPA 6020A
Magnesium	47	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:51	JMW	EPA 6020A
Potassium	2.9	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:51	JMW	EPA 6020A
Sodium	120	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:51	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: EK02561-03
Name: AP1
Matrix: Ground Water - Grab

Sampled: 11/10/21 17:26
Received: 11/11/21 12:34
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	12	mg/L		11/22/21 12:09	5	5.0	11/22/21 12:09	CRD	EPA 300.0 REV 2.1
Fluoride	2.11	mg/L		11/22/21 12:09	5	1.25	11/22/21 12:09	CRD	EPA 300.0 REV 2.1
Sulfate	160	mg/L		11/22/21 12:28	25	25	11/22/21 12:28	CRD	EPA 300.0 REV 2.1
Field - PIA									
Dissolved oxygen, Field	3.5	mg/L		11/10/21 17:26	1		11/10/21 17:26	FIELD	Field
Oxidation Reduction Potential	-25.0	mV		11/10/21 17:26	1	-500	11/10/21 17:26	FIELD	Field
pH, Field Measured	7.60	pH Units		11/10/21 17:26	1		11/10/21 17:26	FIELD	Field
Specific Conductance, Field Measured	594.5	umhos/cm		11/10/21 17:26	1		11/10/21 17:26	FIELD	Field
Temperature, Field Measured	13.2	°C		11/10/21 17:26	1		11/10/21 17:26	FIELD	Field
Turbidity, Field Measured	469	NTU		11/10/21 17:26	1	0.00	11/10/21 17:26	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	110	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		11/15/21 10:30	1	10	11/15/21 10:30	JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	370	mg/L		11/12/21 09:31	1	26	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	570	ug/L		11/18/21 08:26	5	10	11/22/21 12:55	JMW	EPA 6020A
Calcium	32	mg/L		11/18/21 08:26	5	0.15	11/22/21 12:55	JMW	EPA 6020A
Magnesium	5.9	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:55	JMW	EPA 6020A
Potassium	7.6	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:55	JMW	EPA 6020A
Sodium	93	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:55	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: EK02561-04
Name: AP2
Matrix: Ground Water - Grab

Sampled: 11/10/21 16:56
Received: 11/11/21 12:34
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	18	mg/L	Q4	11/22/21 14:16	5	5.0	11/22/21 14:16	CRD	EPA 300.0 REV 2.1
Fluoride	0.717	mg/L		11/22/21 13:22	1	0.250	11/22/21 13:22	CRD	EPA 300.0 REV 2.1
Sulfate	110	mg/L	Q4	11/22/21 14:34	25	25	11/22/21 14:34	CRD	EPA 300.0 REV 2.1
Field - PIA									
Dissolved oxygen, Field	2.1	mg/L		11/10/21 16:56	1		11/10/21 16:56	FIELD	Field
Oxidation Reduction Potential	-104	mV		11/10/21 16:56	1	-500	11/10/21 16:56	FIELD	Field
pH, Field Measured	7.50	pH Units		11/10/21 16:56	1		11/10/21 16:56	FIELD	Field
Specific Conductance, Field Measured	584.4	umhos/cm		11/10/21 16:56	1		11/10/21 16:56	FIELD	Field
Temperature, Field Measured	12.3	°C		11/10/21 16:56	1		11/10/21 16:56	FIELD	Field
Turbidity, Field Measured	502	NTU		11/10/21 16:56	1	0.00	11/10/21 16:56	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	120	mg/L		11/17/21 10:22	1	10	11/17/21 10:22	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		11/17/21 10:22	1	10	11/17/21 10:22	JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	330	mg/L		11/12/21 09:31	1	26	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	430	ug/L		11/18/21 08:26	5	10	11/22/21 12:59	JMW	EPA 6020A
Calcium	28	mg/L		11/18/21 08:26	5	0.15	11/22/21 12:59	JMW	EPA 6020A
Magnesium	6.3	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:59	JMW	EPA 6020A
Potassium	15	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:59	JMW	EPA 6020A
Sodium	86	mg/L		11/18/21 08:26	5	0.10	11/22/21 12:59	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: EK02561-05
Name: FIELD BLANK
Matrix: DI Water - Field Blank

Sampled: 11/10/21 16:00
Received: 11/11/21 12:34
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	< 1.0	mg/L		11/23/21 23:45	1	1.0	11/23/21 23:45	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		11/23/21 23:45	1	0.250	11/23/21 23:45	CRD	EPA 300.0 REV 2.1
Sulfate	< 1.0	mg/L		11/23/21 23:45	1	1.0	11/23/21 23:45	CRD	EPA 300.0 REV 2.1
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 2.0	mg/L		11/17/21 14:14	1	2.0	11/17/21 14:14	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 2.0	mg/L		11/17/21 14:14	1	2.0	11/17/21 14:14	JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	< 17	mg/L		11/12/21 09:31	1	17	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	17	ug/L		11/18/21 08:26	5	10	11/22/21 13:02	JMW	EPA 6020A
Calcium	< 0.15	mg/L		11/18/21 08:26	5	0.15	11/22/21 13:02	JMW	EPA 6020A
Magnesium	< 0.10	mg/L		11/18/21 08:26	5	0.10	11/22/21 13:02	JMW	EPA 6020A
Potassium	< 0.10	mg/L		11/18/21 08:26	5	0.10	11/22/21 13:02	JMW	EPA 6020A
Sodium	< 0.10	mg/L		11/18/21 08:26	5	0.10	11/22/21 13:02	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: EK02561-06
Name: EQUIPMENT BLANK
Matrix: DI Water - Equipment Blank

Sampled: 11/10/21 16:00
Received: 11/11/21 12:34
PO #: 662721

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	< 1.0	mg/L		11/23/21 18:40	1	1.0	11/23/21 18:40	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		11/23/21 18:40	1	0.250	11/23/21 18:40	CRD	EPA 300.0 REV 2.1
Sulfate	< 1.0	mg/L		11/23/21 18:40	1	1.0	11/23/21 18:40	CRD	EPA 300.0 REV 2.1
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 2.0	mg/L		11/17/21 14:14	1	2.0	11/17/21 14:14	JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 2.0	mg/L		11/17/21 14:14	1	2.0	11/17/21 14:14	JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	< 17	mg/L		11/12/21 09:31	1	17	11/12/21 15:50	JAA	SM 2540C
Total Metals - PIA									
Boron	12	ug/L		11/18/21 08:26	5	10	11/22/21 13:06	JMW	EPA 6020A
Calcium	< 0.15	mg/L		11/18/21 08:26	5	0.15	11/22/21 13:06	JMW	EPA 6020A
Magnesium	< 0.10	mg/L		11/18/21 08:26	5	0.10	11/22/21 13:06	JMW	EPA 6020A
Potassium	< 0.10	mg/L		11/18/21 08:26	5	0.10	11/22/21 13:06	JMW	EPA 6020A
Sodium	< 0.10	mg/L		11/18/21 08:26	5	0.10	11/22/21 13:06	JMW	EPA 6020A

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B148253 - No Prep - SM 2540C									
Blank (B148253-BLK1)				Prepared & Analyzed: 11/12/21					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B148253-BS1)				Prepared & Analyzed: 11/12/21					
Solids - total dissolved solids (TDS)	953	mg/L		1000		95	84.9-109		
Duplicate (B148253-DUP2)	**Sample: EK02561-01**			Prepared & Analyzed: 11/12/21					
Solids - total dissolved solids (TDS)	560	mg/L	M		510			9	5
Batch B148496 - No Prep - SM 2320B 1997									
Blank (B148496-BLK1)				Prepared & Analyzed: 11/15/21					
Alkalinity - bicarbonate as CaCO3	2.50	mg/L							
Blank (B148496-BLK2)				Prepared & Analyzed: 11/15/21					
Alkalinity - bicarbonate as CaCO3	2.50	mg/L							
Duplicate (B148496-DUP1)	**Sample: EK02561-01**			Prepared & Analyzed: 11/15/21					
Alkalinity - bicarbonate as CaCO3	400	mg/L	M		450			12	10
Batch B148497 - No Prep - SM 2320B 1997									
Blank (B148497-BLK1)				Prepared & Analyzed: 11/15/21					
Alkalinity - carbonate as CaCO3	2.50	mg/L							
Blank (B148497-BLK2)				Prepared & Analyzed: 11/15/21					
Alkalinity - carbonate as CaCO3	2.50	mg/L							
Duplicate (B148497-DUP1)	**Sample: EK02561-01**			Prepared & Analyzed: 11/15/21					
Alkalinity - carbonate as CaCO3	< 10	mg/L	M		ND				10
Batch B148552 - SW 3015 - EPA 6020A									
Blank (B148552-BLK1)				Prepared: 11/16/21 Analyzed: 11/22/21					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B148552-BS1)				Prepared: 11/16/21 Analyzed: 11/22/21					
Boron	560	ug/L		555.6		101	80-120		
Calcium	5.87	mg/L		5.556		106	80-120		
Magnesium	5.94	mg/L		5.556		107	80-120		
Potassium	5.63	mg/L		5.556		101	80-120		
Sodium	5.68	mg/L		5.556		102	80-120		
Batch B148767 - No Prep - SM 2320B 1997									
Blank (B148767-BLK1)				Prepared & Analyzed: 11/17/21					
Alkalinity - carbonate as CaCO3	< 2.0	mg/L							
Batch B148768 - No Prep - SM 2320B 1997									
Blank (B148768-BLK1)				Prepared & Analyzed: 11/17/21					

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B148768 - No Prep - SM 2320B 1997									
Blank (B148768-BLK1)				Prepared & Analyzed: 11/17/21					
Alkalinity - bicarbonate as CaCO3	< 2.0	mg/L							
Batch B148769 - No Prep - SM 2320B 1997									
Blank (B148769-BLK1)				Prepared & Analyzed: 11/17/21					
Alkalinity - bicarbonate as CaCO3	2.50	mg/L							
Duplicate (B148769-DUP1)	**Sample: EK02561-04**			Prepared & Analyzed: 11/17/21					
Alkalinity - bicarbonate as CaCO3	138	mg/L			125			10	10
Batch B148770 - No Prep - SM 2320B 1997									
Blank (B148770-BLK1)				Prepared & Analyzed: 11/17/21					
Alkalinity - carbonate as CaCO3	< 2.0	mg/L							
Duplicate (B148770-DUP1)	**Sample: EK02561-04**			Prepared & Analyzed: 11/17/21					
Alkalinity - carbonate as CaCO3	< 10	mg/L			ND				10
Batch B148807 - SW 3015 - EPA 6020A									
Blank (B148807-BLK1)				Prepared: 11/18/21 Analyzed: 11/22/21					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B148807-BS1)				Prepared: 11/18/21 Analyzed: 11/22/21					
Boron	557	ug/L		555.6		100	80-120		
Calcium	5.77	mg/L		5.556		104	80-120		
Magnesium	5.86	mg/L		5.556		105	80-120		
Potassium	5.53	mg/L		5.556		100	80-120		
Sodium	5.63	mg/L		5.556		101	80-120		
Batch B149081 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B149081-CCB1)				Prepared & Analyzed: 11/19/21					
Chloride	0.400	mg/L							
Sulfate	0.00	mg/L							
Calibration Check (B149081-CCV1)				Prepared & Analyzed: 11/19/21					
Chloride	4.84	mg/L		5.000		97	90-110		
Sulfate	4.94	mg/L		5.000		99	90-110		
Batch B149316 - SW 3015 - EPA 6020A									
Blank (B149316-BLK1)				Prepared: 11/23/21 Analyzed: 11/29/21					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B149316-BS1)				Prepared: 11/23/21 Analyzed: 11/29/21					

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B149316 - SW 3015 - EPA 6020A									
LCS (B149316-BS1)				Prepared: 11/23/21 Analyzed: 11/29/21					
Boron	485	ug/L		555.6		87	80-120		
Calcium	5.53	mg/L		5.556		100	80-120		
Magnesium	5.73	mg/L		5.556		103	80-120		
Potassium	5.80	mg/L		5.556		104	80-120		
Sodium	5.71	mg/L		5.556		103	80-120		
Batch B149322 - IC No Prep - EPA 300.0 REV 2.1									
Blank (B149322-BLK1)				Prepared & Analyzed: 11/22/21					
Chloride	< 1.0	mg/L							
Fluoride	< 0.250	mg/L							
Sulfate	< 1.0	mg/L							
Blank (B149322-BLK2)				Prepared & Analyzed: 11/22/21					
Chloride	< 1.0	mg/L							
Sulfate	< 1.0	mg/L							
Fluoride	< 0.250	mg/L							
Calibration Blank (B149322-CCB1)				Prepared & Analyzed: 11/22/21					
Sulfate	0.00	mg/L							
Fluoride	0.00	mg/L							
Chloride	0.494	mg/L							
Calibration Check (B149322-CCV1)				Prepared & Analyzed: 11/22/21					
Fluoride	5.23	mg/L		5.000		105	90-110		
Chloride	4.98	mg/L		5.000		100	90-110		
Sulfate	4.99	mg/L		5.000		100	90-110		
MRL Check (B149322-MRL1)				Prepared & Analyzed: 11/22/21					
Sulfate	0.322	mg/L		0.2500		129	0-200		
Chloride	< 1.0	mg/L		0.2500			0-200		
Fluoride	0.480	mg/L		0.2500		192	0-200		
MRL Check (B149322-MRL2)				Prepared & Analyzed: 11/22/21					
Fluoride	0.484	mg/L		0.2500		194	0-200		
Chloride	< 1.0	mg/L		0.2500			0-200		
Sulfate	0.340	mg/L		0.2500		136	0-200		
Matrix Spike (B149322-MS1)	**Sample: EK02561-01**			Prepared & Analyzed: 11/22/21					
Chloride	1.0E9	mg/L	Q4	1.500	62	NR	80-120		
Sulfate	2.43	mg/L		1.500	0.957	98	80-120		
Fluoride	2.08	mg/L		1.500	0.568	101	80-120		
Matrix Spike (B149322-MS2)	**Sample: EK02561-02**			Prepared & Analyzed: 11/22/21					
Chloride	1.0E9	mg/L	Q4	1.500	24	NR	80-120		
Sulfate	6.04	mg/L		1.500	4.40	109	80-120		
Fluoride	2.08	mg/L		1.500	0.609	98	80-120		
Matrix Spike (B149322-MS3)	**Sample: EK02561-04**			Prepared & Analyzed: 11/22/21					
Chloride	1.0E9	mg/L	Q4	1.500	18	NR	80-120		
Sulfate	1.00E9	mg/L	Q4	1.500	109	NR	80-120		
Fluoride	2.18	mg/L		1.500	0.717	98	80-120		
Matrix Spike Dup (B149322-MSD1)	**Sample: EK02561-01**			Prepared & Analyzed: 11/22/21					
Fluoride	2.07	mg/L		1.500	0.568	100	80-120	0.5	20

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B149322 - IC No Prep - EPA 300.0 REV 2.1									
Matrix Spike Dup (B149322-MSD1)	**Sample: EK02561-01**			Prepared & Analyzed: 11/22/21					
Sulfate	2.45	mg/L		1.500	0.957	99	80-120	0.5	20
Chloride	1.0E9	mg/L	Q4	1.500	62	NR	80-120	0	20
Matrix Spike Dup (B149322-MSD2)	**Sample: EK02561-02**			Prepared & Analyzed: 11/22/21					
Fluoride	2.10	mg/L		1.500	0.609	100	80-120	1	20
Sulfate	6.09	mg/L		1.500	4.40	113	80-120	0.9	20
Chloride	1.0E9	mg/L	Q4	1.500	24	NR	80-120	0	20
Matrix Spike Dup (B149322-MSD3)	**Sample: EK02561-04**			Prepared & Analyzed: 11/22/21					
Fluoride	2.20	mg/L		1.500	0.717	99	80-120	0.9	20
Chloride	1.0E9	mg/L	Q4	1.500	18	NR	80-120	0	20
Batch B149324 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B149324-CCB1)				Prepared & Analyzed: 11/22/21					
Sulfate	0.00	mg/L							
Calibration Check (B149324-CCV1)				Prepared & Analyzed: 11/22/21					
Sulfate	4.88	mg/L		5.000		98	90-110		
Batch B149425 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B149425-CCB1)				Prepared & Analyzed: 11/23/21					
Sulfate	0.00	mg/L							
Chloride	0.269	mg/L							
Fluoride	0.200	mg/L							
Calibration Check (B149425-CCV1)				Prepared & Analyzed: 11/23/21					
Chloride	4.87	mg/L		5.000		97	90-110		
Fluoride	5.11	mg/L		5.000		102	90-110		
Sulfate	4.98	mg/L		5.000		100	90-110		
Batch B149428 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B149428-CCB1)				Prepared & Analyzed: 11/23/21					
Fluoride	0.00	mg/L							
Sulfate	0.115	mg/L							
Chloride	0.514	mg/L							
Calibration Check (B149428-CCV1)				Prepared & Analyzed: 11/23/21					
Sulfate	5.00	mg/L		5.000		100	90-110		
Chloride	4.97	mg/L		5.000		99	90-110		
Fluoride	4.97	mg/L		5.000		99	90-110		
Batch B149496 - No Prep - SM 4500F C 1997									
Calibration Blank (B149496-CCB2)				Prepared & Analyzed: 11/29/21					
Fluoride	0.0170	mg/L							
Calibration Check (B149496-CCV2)				Prepared & Analyzed: 11/29/21					
Fluoride	0.743	mg/L		0.7000		106	90-110		
Matrix Spike (B149496-MS5)	**Sample: EK02071-05**			Prepared & Analyzed: 11/29/21					
Fluoride	1.43	mg/L		1.000	0.377	105	80-120		
Matrix Spike Dup (B149496-MSD5)	**Sample: EK02071-05**			Prepared & Analyzed: 11/29/21					
Fluoride	1.48	mg/L		1.000	0.377	111	80-120	4	20

NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050
TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615
TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)
Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)
Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807
USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050
Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

M Analyte failed to meet the required acceptance criteria for duplicate analysis.
Q4 The matrix spike recovery result is unusable since the analyte concentration in the sample is greater than four times the spike level. The associated blank spike was acceptable.

Gail J Schindler

Certified by: Gail Schindler, Project Manager

Multiparameter Meter Field Calibration Checklist

Field Personnel	Joe Reed	Date:	11/9/21
Weather conditions:	mostly cloudy 55-60°F wind SSW 5-10 mph	Signature:	Joseph R Reed
Make/Model	AquaTroll 600	S/N	606127

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*: 15°C	
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration: 930

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	4.06	s.u.	±0.1 s.u.	Pass	No	N/A
7a	7.01	s.u.	±0.1 s.u.			
10a	9.99	s.u.	±0.1 s.u.			
SC Zero (DI)	8.13	µS/cm	0<25 µS/cm			
SC 2000	2012.3	µS/cm	±5%			
ORP	239.0	mV	±15 mV			
DO (Zero pt)	0.05	mg/L	±0.1			
DO (Saturated)	98.1	%	97-100%			
Turbidity (DI)	0.84	NTU	<2 NTU			

ICV (Initial Calibration Verification)

Buffer	Check Value	Units	Range	Pass/Fail	11/9/21 Action Taken?
4b	3.99	s.u.	±0.15 s.u.	Pass	~~N/A~~ None
7b	7.01	s.u.	±0.15 s.u.		
10b	9.97	s.u.	±0.15 s.u.		
SC1000	1009.3	µS/cm	±5%		

CCV (Continued Calibration Verification):

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4		s.u.	±0.1 s.u.			
7		s.u.	±0.1 s.u.			
10		s.u.	±0.1 s.u.			
SC 1000		µS/cm	±5%			
DO (Zero pt)		mg/L	±0.1 mg/L			
Turbidity (DI)		NTU	<2 NTU			

CCV (Continued Calibration Verification):

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4		s.u.	±0.1 s.u.			
7*		s.u.	±0.1 s.u.			
10		s.u.	±0.1 s.u.			
SC 1000		µS/cm	±5%			
DO (Zero pt)		mg/L	±0.1 mg/L			
Turbidity (DI)		NTU	<2 NTU			
Comments:						

Signature: Joseph R Rad

Date: 11/9/21

Multiparameter Meter Field Calibration Checklist

Field Personnel	MJN	Date:	4/9/21
Weather conditions:	53°, cloudy, wind E 5 mph	Signature:	
Make/Model	AquaTroll 600	S/N	846000

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*:	
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration: 0813

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	4.05	s.u.	±0.1 s.u.	P	NO	
7a	7.09	s.u.	±0.1 s.u.			
10a	10.09	s.u.	±0.1 s.u.			
SC Zero (DI)	5.34	µS/cm	0<25 µS/cm			
SC 2000	2006	µS/cm	±5%			
ORP	245	mV	±15 mV			
DO (Zero pt)	0.06	mg/L	±0.1			
DO (Saturated)	99.32	%	97-100%			
Turbidity (DI)	0.00	NTU	<2 NTU			

ICV (Initial Calibration Verification) 0816

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	4.06	s.u.	±0.15 s.u.	P	
7b	6.96	s.u.	±0.15 s.u.		
10b	10.03	s.u.	±0.15 s.u.		
SC1000	100	µS/cm	±5%		

CCV (Continued Calibration Verification): 1204 Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.07	s.u.	±0.1 s.u.	P	NO	
7	7.10	s.u.	±0.1 s.u.			
10	10.08	s.u.	±0.1 s.u.			
SC 1000	1009	µS/cm	±5%			
DO (Zero pt)	0.06	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			

CCV (Continued Calibration Verification): 1648 Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.06	s.u.	±0.1 s.u.	P	NO	
7*	7.08	s.u.	±0.1 s.u.			
10	10.08	s.u.	±0.1 s.u.			
SC 1000	1036	µS/cm	±5%			
DO (Zero pt)	0.05	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			
Comments:						

Signature: [signature]

Date: 11/9/21

Multiparameter Meter Field Calibration Checklist

Field Personnel	Aaron Pemberton	Date:	11/10/2021
Weather conditions:	52° – 64° F cloudy Wind E at 5mph	Signature:	
Make/Model	AquaTroll 600	S/N	606129

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*:	242 @ 15°C
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration: 0821

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	4.04	s.u.	±0.1 s.u.	pass	Yes	4.00
7a	7.14	s.u.	±0.1 s.u.	Fail	Yes	7.06
10a	10.14	s.u.	±0.1 s.u.	Fail	Yes	10.08
SC Zero (DI)	1.14	µS/cm	0<25 µS/cm	Pass	No	—
SC 2000	2038.6	µS/cm	±5%			—
ORP	238.7	mV	±15 mV			—
DO (Zero pt)	0.08	mg/L	±0.1			—
DO (Saturated)	98.87	%	97-100%			—
Turbidity (DI)	—	NTU	<2 NTU	—	—	—

ICV (Initial Calibration Verification)

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	4.04	s.u.	±0.15 s.u.	Pass	—
7b	6.95	s.u.	±0.15 s.u.		—
10b	10.01	s.u.	±0.15 s.u.		—
SC1000	995.05	µS/cm	±5%		—

CCV (Continued Calibration Verification): 1231

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.03	s.u.	±0.1 s.u.	Pass	No	—
7	7.00	s.u.	±0.1 s.u.			—
10	10.02	s.u.	±0.1 s.u.			—
SC 1000	999.82	µS/cm	±5%			—
DO (Zero pt)	0.07	mg/L	±0.1 mg/L			—
Turbidity (DI)	—	NTU	<2 NTU	—	—	—

CCV (Continued Calibration Verification): 1631

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.09	s.u.	±0.1 s.u.	Pass	No	—
7*	7.10	s.u.	±0.1 s.u.			—
10	10.10	s.u.	±0.1 s.u.			—
SC 1000	1006.2	µS/cm	±5%			—
DO (Zero pt)	0.06	mg/L	±0.1 mg/L			—
Turbidity (DI)	—	NTU	<2 NTU	—	—	—

Comments:
Turbidity taken with Lamotte Turbidity meter

Signature: 

Date: 11/16/2021

Multiparameter Meter Field Calibration Checklist

Field Personnel	MJN	Date:	11/10/21
Weather conditions:	49°, partly cloudy, NW 3MPH wind.	Signature:	
Make/Model	AquaTroll 600	S/N	846000

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*:	
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration: 0810

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	4.06	s.u.	±0.1 s.u.	Pass	yes	4.00
7a	7.10	s.u.	±0.1 s.u.	Pass	Yes	7.06
10a	10.17	s.u.	±0.1 s.u.	Fail	Yes	9.99
SC Zero (DI)	6.89	µS/cm	0<25 µS/cm	Pass	NO	N/A
SC 2000	2016	µS/cm	±5%			
ORP	249	mV	±15 mV			
DO (Zero pt)	0.04	mg/L	±0.1			
DO (Saturated)	98.37	%	97-100%			
Turbidity (DI)	0.00	NTU	<2 NTU			

ICV (Initial Calibration Verification) 0820

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	4.00	s.u.	±0.15 s.u.	Pass	None
7b	6.89	s.u.	±0.15 s.u.		
10b	9.96	s.u.	±0.15 s.u.		
SC1000	1001	µS/cm	±5%		

CCV (Continued Calibration Verification): 1438 — Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.02	s.u.	±0.1 s.u.	P	NO	N/A
7	7.05	s.u.	±0.1 s.u.			
10	10.01	s.u.	±0.1 s.u.			
SC 1000	1016	µS/cm	±5%			
DO (Zero pt)	0.09	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			

CCV (Continued Calibration Verification): 1620 — Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	3.96	s.u.	±0.1 s.u.	P	NO	N/A
7*	6.97	s.u.	±0.1 s.u.			
10	9.92	s.u.	±0.1 s.u.			
SC 1000	981	µS/cm	±5%			
DO (Zero pt)	0.06	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			

Comments:

Signature: [signature] Date: 11/10/21

Multiparameter Meter Field Calibration Checklist

Field Personnel	Matt Julien	Date:	11/10/21
Weather conditions:	52°F – 65°F cloudy wind E 5-10mph	Signature:	
Make/Model	AquaTroll 600	S/N	762098

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*:	
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	4.02	s.u.	±0.1 s.u.	Pass	No	N/A
7a	7.04	s.u.	±0.1 s.u.			
10a	10.00	s.u.	±0.1 s.u.			
SC Zero (DI)	23.68	µS/cm	0<25 µS/cm			
SC 2000	2001.7	µS/cm	±5%			
ORP	231.1 @ 14°C	mV	±15 mV			
DO (Zero pt)	0.00	mg/L	±0.1			
DO (Saturated)	99.7%	%	97-100%			
Turbidity (DI)	0.00	NTU	<2 NTU			

ICV (Initial Calibration Verification) 0930

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	4.13	s.u.	±0.15 s.u.	Pass	None
7b	6.93	s.u.	±0.15 s.u.		
10b	9.99	s.u.	±0.15 s.u.		
SC1000	999.54	µS/cm	±5%		

CCV (Continued Calibration Verification): 14:00

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.06	s.u.	±0.1 s.u.	Pass	No	N/A
7	7.07	s.u.	±0.1 s.u.			
10	10.04	s.u.	±0.1 s.u.			
SC 1000	980.03	µS/cm	±5%			
DO (Zero pt)	0.02	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			

CCV (Continued Calibration Verification): 1730

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.05	s.u.	±0.1 s.u.	Pass	No	N/A
7*	7.07	s.u.	±0.1 s.u.			
10	10.04	s.u.	±0.1 s.u.			
SC 1000	978.53	µS/cm	±5%			
DO (Zero pt)	0.03	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			
Comments:						

Signature: [signature]

Date: 11/10/21

Multiparameter Meter Field Calibration Checklist

Field Personnel	Matt Julian Joe Reed	Date:	11/3/21
Weather conditions:	53°-62°F M. cloudy wind SSW 5-10mph	Signature:	
Make/Model	AquaTroll 600	S/N	762098

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*: 242@15°C	
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration: 09:15

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	3.97	s.u.	±0.1 s.u.	Pass	No	N/A
7a	6.99	s.u.	±0.1 s.u.			
10a	10.02	s.u.	±0.1 s.u.			
SC Zero (DI)	22.98	µS/cm	0<25 µS/cm			
SC 2000	1999.2	µS/cm	±5%			
ORP	237.2 @15°C	mV	±15 mV			
DO (Zero pt)	0.01	mg/L	±0.1			
DO (Saturated)	98.10	%	97-100%			
Turbidity (DI)	0.00	NTU	<2 NTU			

ICV (Initial Calibration Verification) 09:27

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	4.13	s.u.	±0.15 s.u.	Pass	None
7b	6.86	s.u.	±0.15 s.u.		
10b	9.87	s.u.	±0.15 s.u.		
SC1000	976.96	µS/cm	±5%		

CCV (Continued Calibration Verification): 12:56 — Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.00	s.u.	±0.1 s.u.	Pass	No	N/A
7	7.02	s.u.	±0.1 s.u.			
10	10.08	s.u.	±0.1 s.u.			
SC 1000	972.61	µS/cm	±5%			
DO (Zero pt)	0.01	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			

CCV (Continued Calibration Verification): 16:30 — Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.02	s.u.	±0.1 s.u.	Pass	No	N/A
7*	7.03	s.u.	±0.1 s.u.			
10	10.09	s.u.	±0.1 s.u.			
SC 1000	976.31	µS/cm	±5%			
DO (Zero pt)	0.02	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			
Comments:						

Signature: [signature]

Date: 11/9/21

Multiparameter Meter Field Calibration Checklist

Field Personnel	Aaron Pemberton	Date:	11/11/2021
Weather conditions:	55° F cloudy, rain Wind SW at 14mph	Signature:	
Make/Model	AquaTroll 600	S/N	606127

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*:	242 @ 15°C
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration: 0925

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	4.03	s.u.	±0.1 s.u.	pass	No	—
7a	7.06	s.u.	±0.1 s.u.			—
10a	10.07	s.u.	±0.1 s.u.			—
SC Zero (DI)	13.56	µS/cm	0<25 µS/cm			—
SC 2000	2006.7	µS/cm	±5%			—
ORP	242.7	mV	±15 mV			—
DO (Zero pt)	0.08	mg/L	±0.1			—
DO (Saturated)	99.87	%	97-100%			—
Turbidity (DI)	—	NTU	<2 NTU	—	—	—

ICV (Initial Calibration Verification)

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	4.02	s.u.	±0.15 s.u.	pass	—
7b	6.97	s.u.	±0.15 s.u.		—
10b	10.05	s.u.	±0.15 s.u.		—
SC1000	966.55	µS/cm	±5%		—

CCV (Continued Calibration Verification): 1310

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.05	s.u.	±0.1 s.u.	pass	No	—
7	7.07	s.u.	±0.1 s.u.			—
10	10.06	s.u.	±0.1 s.u.			—
SC 1000	969.33	µS/cm	±5%			—
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	—	—	—
Turbidity (DI)	—	NTU	<2 NTU	—	—	—

CCV (Continued Calibration Verification): 1655

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.02	s.u.	±0.1 s.u.	pass	No	—
7*	7.08	s.u.	±0.1 s.u.			—
10	10.06	s.u.	±0.1 s.u.			—
SC 1000	973.62	µS/cm	±5%			—
DO (Zero pt)	0.08	mg/L	±0.1 mg/L	—	—	—
Turbidity (DI)	—	NTU	<2 NTU	—	—	—
Comments:	Turbidity readings taken on Lamotte Turbidity meter					

Signature: 

Date: 11/11/2021

Multiparameter Meter Field Calibration Checklist

Field Personnel	MJN	Date:	11/11/21
Weather conditions:	56°, cloudy, raining, NE 5mph wind	Signature:	
Make/Model	AquaTroll 600	S/N	84E000

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*:	
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration: 0907

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	3.97	s.u.	±0.1 s.u.	P	NO	NA
7a	6.99	s.u.	±0.1 s.u.			
10a	9.96	s.u.	±0.1 s.u.			
SC Zero (DI)	0.76	µS/cm	0<25 µS/cm			
SC 2000	2021	µS/cm	±5%			
ORP	249	mV	±15 mV			
DO (Zero pt)	0.04	mg/L	±0.1			
DO (Saturated)	98.37	%	97-100%			
Turbidity (DI)	0.00	NTU	<2 NTU			

ICV (Initial Calibration Verification) 0908

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	4.01	s.u.	±0.15 s.u.	P	None
7b	6.89	s.u.	±0.15 s.u.		
10b	9.89	s.u.	±0.15 s.u.		
SC1000	1004	µS/cm	±5%		

CCV (Continued Calibration Verification): 1225 — Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.02	s.u.	±0.1 s.u.	P	NO	NA
7	6.98	s.u.	±0.1 s.u.			
10	9.99	s.u.	±0.1 s.u.			
SC 1000	1004	µS/cm	±5%			
DO (Zero pt)	0.06	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			

CCV (Continued Calibration Verification): 1632 — Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.02	s.u.	±0.1 s.u.	P	NO	NA
7*	7.04	s.u.	±0.1 s.u.			
10	9.96	s.u.	±0.1 s.u.			
SC 1000	1059	µS/cm	±5%			
DO (Zero pt)	0.08	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			
Comments:						

Signature: [signature]

Date: 11/11/21

Multiparameter Meter Field Calibration Checklist

Field Personnel	Matt Julian	Date:	11/11/21
Weather conditions:	47°-50°F cloudy - P. cloudy wind W 15-20 mph	Signature:	
Make/Model	AquaTroll 600	S/N	762098

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*: 241 @ 16°C	
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration: 09:41

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	3.97	s.u.	±0.1 s.u.	Pass	No	N/A
7a	7.01	s.u.	±0.1 s.u.			
10a	10.01	s.u.	±0.1 s.u.			
SC Zero (DI)	20.79	µS/cm	0<25 µS/cm			
SC 2000	1966.6	µS/cm	±5%			
ORP	239.1	mV	±15 mV			
DO (Zero pt)	0.02	mg/L	±0.1			
DO (Saturated)	97.62	%	97-100%			
Turbidity (DI)	0.00	NTU	<2 NTU			

ICV (Initial Calibration Verification) 09:50

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	4.02	s.u.	±0.15 s.u.	Pass	None
7b	6.92	s.u.	±0.15 s.u.		
10b	9.95	s.u.	±0.15 s.u.		
SC1000	970.50	µS/cm	±5%		

CCV (Continued Calibration Verification): 13:25

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.00	s.u.	±0.1 s.u.	Pass	No	N/A
7	7.05	s.u.	±0.1 s.u.			
10	10.06	s.u.	±0.1 s.u.			
SC 1000	984.60	µS/cm	±5%			
DO (Zero pt)	0.01	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			

CCV (Continued Calibration Verification): 16:46

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.01	s.u.	±0.1 s.u.	Pass	No	N/A
7*	7.06	s.u.	±0.1 s.u.			
10	10.06	s.u.	±0.1 s.u.			
SC 1000	981.31	µS/cm	±5%			
DO (Zero pt)	0.02	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			
Comments:						

Signature:

Date: 11/11/21

Multiparameter Meter Field Calibration Checklist

Field Personnel	Aaron Pemberton	Date:	11/2/2021
Weather conditions:	46°-50°F Sunny Wind SW 14mph	Signature:	
Make/Model	AquaTroll 600	S/N	606127

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*:	249 @ 10°C
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration: 0830

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	3.99	s.u.	±0.1 s.u.	pass	NO	–
7a	7.01	s.u.	±0.1 s.u.			–
10a	10.00	s.u.	±0.1 s.u.			–
SC Zero (DI)	23.83	µS/cm	0<25 µS/cm			–
SC 2000	2060.3	µS/cm	±5%			–
ORP	251.6	mV	±15 mV			–
DO (Zero pt)	0.09	mg/L	±0.1			–
DO (Saturated)	98.27	%	97-100%	–	–	–
Turbidity (DI)	–	NTU	<2 NTU	–	–	–

ICV (Initial Calibration Verification)

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	4.01	s.u.	±0.15 s.u.	pass	–
7b	6.95	s.u.	±0.15 s.u.		–
10b	10.02	s.u.	±0.15 s.u.		–
SC1000	1015.7	µS/cm	±5%		–

CCV (Continued Calibration Verification): 1114

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	4.08	s.u.	±0.1 s.u.	pass	NO	–
7	7.09	s.u.	±0.1 s.u.			–
10	10.08	s.u.	±0.1 s.u.			–
SC 1000	1018.7	µS/cm	±5%			–
DO (Zero pt)	0.08	mg/L	±0.1 mg/L			–
Turbidity (DI)	–	NTU	<2 NTU	–	–	–

CCV (Continued Calibration Verification):

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4		s.u.	±0.1 s.u.			
7*		s.u.	±0.1 s.u.			
10		s.u.	±0.1 s.u.			
SC 1000		µS/cm	±5%			
DO (Zero pt)		mg/L	±0.1 mg/L			
Turbidity (DI)		NTU	<2 NTU			
Comments:	Turbidity taken with LaMotte Turbidity meter					

Signature: [signature]

Date: 11/12/21

Multiparameter Meter Field Calibration Checklist

Field Personnel	Matt Sutton	Date:	11/12/21
Weather conditions:	47°-50°F sunny windy w/ 15-20mph	Signature:	
Make/Model	AquaTroll 600	S/N	762098

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*: 240/10	
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	4.02	s.u.	±0.1 s.u.	Pass	No	N/A
7a	7.08	s.u.	±0.1 s.u.			
10a	10.09	s.u.	±0.1 s.u.			
SC Zero (DI)	11.04	µS/cm	0<25 µS/cm			
SC 2000	1996.2	µS/cm	±5%			
ORP	250.92 10°C	mV	±15 mV			
DO (Zero pt)	0.02	mg/L	±0.1			
DO (Saturated)	97.32	%	97-100%			
Turbidity (DI)	0.00	NTU	<2 NTU			

ICV (Initial Calibration Verification) 08:55

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	3.99	s.u.	±0.15 s.u.	Pass	None
7b	6.87	s.u.	±0.15 s.u.		
10b	9.97	s.u.	±0.15 s.u.		
SC1000	982.70	µS/cm	±5%		

CCV (Continued Calibration Verification):

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4		s.u.	±0.1 s.u.			
7		s.u.	±0.1 s.u.			
10		s.u.	±0.1 s.u.			
SC 1000		µS/cm	±5%			
DO (Zero pt)		mg/L	±0.1 mg/L			
Turbidity (DI)		NTU	<2 NTU			

CCV (Continued Calibration Verification):

Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4		s.u.	±0.1 s.u.			
7*		s.u.	±0.1 s.u.			
10		s.u.	±0.1 s.u.			
SC 1000		µS/cm	±5%			
DO (Zero pt)		mg/L	±0.1 mg/L			
Turbidity (DI)		NTU	<2 NTU			

Comments:

Signature:

Date: 11/12/21

Multiparameter Meter Field Calibration Checklist

Field Personnel	MJN	Date:	11/12/24
Weather conditions:	45°, SUNNY, NE 7mph WIND	Signature:	
Make/Model	AquaTroll 600	S/N	346000

Instrument unpacked/RDO sensor installed from storage solution and rinsed with pH 4 buffer then triple rinsed with DI water prior. Instrument then subjected to calibration check/calibration regiment (pH 4, then pH 7, then pH 10, followed by Spec Con., ORP, and RDO) instrument and calibration cup rinsed between each buffer.

Sources

	pH Buffers				
Primary Source:					
pH: 4a	4.00	pH: 7a	7.00	pH: 10a	10.00
Range:	+/- 0.02	Range:	+/- 0.02	Range:	+/- 0.02
Manufacturer:	MSI	Manufacturer:	MSI	Manufacturer:	MSI
Lot #:	L159-11	Lot #:	L146-06	Lot #:	K344-09
exp:	10-Jun-23	exp:	1-Jun-23	exp:	17-Dec-22
Secondary Source:					
pH: 4b	4.00	pH: 7b	7.00	pH: 10b	10.00
Range:	+/- 0.01	Range:	+/- 0.01	Range:	+/- 0.01
Manufacturer:	Geotech	Manufacturer:	Geotech	Manufacturer:	Geotech
Lot #:	1GD680	Lot #:	0GJ268	Lot #:	0GJ170
exp:	Apr-23	exp:	Oct-22	exp:	Oct-22

Spec Con.					
µS/cm: DI water	0	µS/cm: SC1000	1000	µS/cm: SC2000	2000
Range:	Not Measured	Range:	+/- 1	Range:	+/- 1 %
Manufacturer:	PDC Laboratories, Inc	Manufacturer:	RICCA Chemical	Manufacturer:	Geotech
Received:		Lot #:	4101A25	Lot #:	1GF629
		exp:	Dec-22	exp:	Jun-22

RDO	Sodium Sulfite in DI Water	ORP	Zobell's Standard
Value:	0	Value*:	
Range:	+/- 0.01	Range:	+/- 10 mV
Manufacturer:	Fisher Chemical	Manufacturer:	In-Situ
Lot #:	168261	Lot #:	1GF668
Prepared by:	PDC Tech Services, Inc:	exp:	Mar-22

Turbidity (if required)					
0 NTU	0 (DI Water)	1 NTU	1	10 NTU	10
Range:	Not Measured	Range:		Range:	
Manufacturer:	PDC Laboratories, Inc	Manufacturer:		Manufacturer:	
Lot #:	NA	Lot #:		Lot #:	
exp:	NA	exp:		exp:	

Notes:	*See bottle for chart of values based on Temperature

Multiparameter Meter Calibration Checklist (continued)

Values are tested at the beginning of the day, at mid-day, and at the end of the day to document potential drift.
CCV checks are conducted ~ every 4 hours, unless only one well is read then is not required.

Initial Calibration Check/Calibration: 0821

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4a	4.02	s.u.	±0.1 s.u.	P	NO	
7a	7.06	s.u.	±0.1 s.u.			
10a	10.08	s.u.	±0.1 s.u.			
SC Zero (DI)	5.36	µS/cm	0<25 µS/cm			
SC 2000	2006	µS/cm	±5%			
ORP	249	mV	±15 mV			
DO (Zero pt)	0.04	mg/L	±0.1			
DO (Saturated)	98.33	%	97-100%			
Turbidity (DI)	0.00	NTU	<2 NTU			

ICV (Initial Calibration Verification) 0824

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?
4b	4.00	s.u.	±0.15 s.u.	P	
7b	7.02	s.u.	±0.15 s.u.		
10b	9.99	s.u.	±0.15 s.u.		
SC1000	1017	µS/cm	±5%		

CCV (Continued Calibration Verification): 1007 — Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4	3.99	s.u.	±0.1 s.u.	P	N	
7	7.01	s.u.	±0.1 s.u.			
10	9.95	s.u.	±0.1 s.u.			
SC 1000	965	µS/cm	±5%			
DO (Zero pt)	0.05	mg/L	±0.1 mg/L			
Turbidity (DI)	0.00	NTU	<2 NTU			

CCV (Continued Calibration Verification): — Approx. every 4 hrs, unless only one well

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading
4		s.u.	±0.1 s.u.			
7*		s.u.	±0.1 s.u.			
10		s.u.	±0.1 s.u.			
SC 1000		µS/cm	±5%			
DO (Zero pt)		mg/L	±0.1 mg/L			
Turbidity (DI)		NTU	<2 NTU			
Comments:						

Signature: 

Date: 11/12/21

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Newton Primary Ash Pond
Client: RAMBOLL
Project Number: 2285
Task #: Unit 501
Start Date: 11/9/21 Time: 0906
Field Personnel: MJN, AP
Finish Date: 11/9/21 Time: 0950

WELL INFORMATION

Well ID: APW7
Casing ID: 2 Inches
Screen Interval: n/a
Borehole Diameter: n/a Inches
Filter Pack Interval: n/a

EVENT TYPE

- ☐ Well Development
- ■ Low-Flow / Low-Stress Sampling
- ☐ Well Volume Approach Sampling
- ☐ Other (Specify below)

PURGE INFORMATION

Purge Method: ☐ Bailer ■ Pump
Bailer Type: n/a
Pump Type and Serial #: n/a
Tube/Pump Intake Depth: n/a
Stabilized Pumping Rate: 100 mL/min

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Date/Time (24-Hour)	Depth FT BTOC	Date/Time (24-Hour)
LNAPL	n/a	n/a	n/a	n/a
Groundwater	46.71	0909	46.71	0950
DNAPL	n/a	n/a	n/a	n/a
Casing Base	n/a	n/a	n/a	n/a

Water Level Serial #: MP30 # 30065

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ■ Well Casing ☐ Borehole
Volume Per Foot: n/a
Standing Water Column: n/a feet
1 Well Volume: n/a Gallons
3 Well Volumes: n/a Gallons
5 Well Volumes: n/a Gallons
10 Well Volumes: n/a Gallons
Total Volumes Produced: n/a Gallons
Well Purged Dry? ☐ Yes ■ No

Water Quality Probe Type and Serial # Aquatroll 600 # 846000

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (mls)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	0909	0	46.71	0	—	—	—	—	—	—	—
purge	0921	1200	46.71	0	14.02	7.30	933.80	0.52	103.42	-78.3	Cloudy
	0923	1400	46.71	0	13.99	7.34	1102.8	0.49	143.33	-86.7	Cloudy
	0925	1600	46.71	0	14.00	7.36	925.34	0.51	108.93	-90.5	Cloudy

NOTES

Field duplicate Dillard here

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

Monitoring Well Evaluation Checklist

Site	Newton Prim Ash Pond Unit 501	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	11/9/21			✓	
Well Number	APW7				

Stick-up Monitoring Wells	Yes	No	NA	**Comments**
1. Outer protective Casing				
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose	✓			
2. Inner casing				
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose	✓			
	Yes	No	NA	
3. Are there weep holes in outer casing?	✓			
4. Weep holes able to drain?	✓			
5. Is there a lockable cap present?	✓			
6. Is there a lock present?	✓			
7. Bumper posts in good condition?	✓			

Flushmount Monitoring Wells	Yes	No	NA
8. Can the lid be secured tightly?			X
9. Does the lid have a gasket that seals?			X
10. No water in the flushmount?			X
11. Is the well cap lockable?			X
12. Is there a lock present?			X

All Monitoring Wells	Yes	No	NA	
Downhole Condition				
12. Water level measuring point clearly marked?	✓			
13. No obstructions in well?	✓			
14. No plant roots or vegetation in well?	✓			
15. No sediment in bottom of well?	✓			
If present, how much sediment?	— ft			
16. Installed as total depth.	ft			
17. Measured total depth of well.	n/a ft			not measured because pump already installed
General Condition	Yes	No	NA	
18. Concrete pad installed?	✓			
19 . Concrete pad				
Slope away form casing?	✓			
Not deteriorated?	✓			
Not heaved or below surrounding grade?	✓			
20. No surface seal settling?	✓			
21. Well clearly visible and labeled?	✓			

Comments:

* Major well repair are those that require a subcontractor or separate mobilization to complete

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Newton Primary Ash Pond
Client: RAMBOLL
Project Number: 2285
Task #: Unit 501
Start Date: 11/9/21 Time: 1043
Field Personnel: MJN, AMP
Finish Date: 11/9/21 Time: 1121

WELL INFORMATION

Well ID: APW8
Casing ID: 2 Inches
Screen Interval: n/a
Borehole Diameter: n/a Inches
Filter Pack Interval: n/a

EVENT TYPE

- ☐ Well Development
- ■ Low-Flow / Low-Stress Sampling
- ☐ Well Volume Approach Sampling
- ☐ Other (Specify below)

PURGE INFORMATION

Purge Method: ☐ Bailer ■ Pump
Bailer Type: n/a
Pump Type and Serial #: n/a
Tube/Pump Intake Depth: n/a
Stabilized Pumping Rate: 100 mL / min

DEPTH MEASUREMENTS

AMP 11/9/21

	INITIAL		FINAL	
	Depth FT BTOC	Date/Time (24-Hour)	Depth FT BTOC	Date/Time (24-Hour)
LNAPL	37.53 n/a	n/a	n/a	n/a
Groundwater	~~37.61~~	1043	37.53	1121
DNAPL	n/a	n/a	n/a	n/a
Casing Base	n/a	n/a	n/a	n/a

Water Level Serial #: MP30 # 30065

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ■ Well Casing ☐ Borehole
Volume Per Foot: n/a
Standing Water Column: n/a feet
1 Well Volume: n/a Gallons
3 Well Volumes: n/a Gallons
5 Well Volumes: n/a Gallons
10 Well Volumes: n/a Gallons
Total Volumes Produced: n/a Gallons
Well Purged Dry? ☐ Yes ■ No

Water Quality Probe Type and Serial # Aquaread 600 # 846000

WATER QUALITY INDICATOR PARAMETERS

AMP 11/9/21

Sampling Stage	Time (military)	Volume Removed (mls)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	1046	0	~~37.61~~ 37.53	0	—	—	—	—	—	—	—
purge	1058	1200	37.53	0	15.70	7.39	1149.6	3.00	31.71	-75.3	clear
	1100	1400	37.53	0	15.65	7.41	1138.7	2.63	34.06	-82.6	clear
	1102	1600	37.53	0	15.64	7.43	1153.1	2.57	23.27	-94.0	clear
	1104	1800	37.53	0	15.67	7.45	1122.8	2.56	12.21	-99.2	clear

NOTES

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

Monitoring Well Evaluation Checklist

Site	Newton Prim Ash Pond Unit 501	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	11/9/2021			✓	
Well Number	APW8				

Stick-up Monitoring Wells	Yes	No	NA	**Comments**
1. Outer protective Casing				
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose	✓			
2. Inner casing				
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose	✓			
	Yes	No	NA	
3. Are there weep holes in outer casing?	✓			
4. Weep holes able to drain?	✓			
5. Is there a lockable cap present?	✓			
6. Is there a lock present?	✓			
7. Bumper posts in good condition?	✓			

Flushmount Monitoring Wells	Yes	No	NA
8. Can the lid be secured tightly?			X
9. Does the lid have a gasket that seals?			X
10. No water in the flushmount?			X
11. Is the well cap lockable?			X
12. Is there a lock present?			X

All Monitoring Wells	Yes	No	NA	
Downhole Condition				
12. Water level measuring point clearly marked?	✓			
13. No obstructions in well?	✓			
14. No plant roots or vegetation in well?	✓			
15. No sediment in bottom of well?	✓			
If present, how much sediment?	— ft			
16. Installed as total depth.	ft			
17. Measured total depth of well.	n/a ft			not measured because pump already installed

General Condition	Yes	No	NA
18. Concrete pad installed?	✓		
19 . Concrete pad			
Slope away form casing?	✓		
Not deteriorated?	✓		
Not heaved or below surrounding grade?	✓		
20. No surface seal settling?	✓		
21. Well clearly visible and labeled?	✓		

Comments:

* Major well repair are those that require a subcontractor or separate mobilization to complete

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Newton Primary Ash Pond
Client: RAMBOLL
Project Number: 2285
Task #: Unit 501
Start Date: 11/9/21 Time: 1142
Field Personnel: MJN, AP
Finish Date: 11/9/21 Time: 1229

WELL INFORMATION

Well ID: APW9
Casing ID: 2 Inches
Screen Interval: n/a
Borehole Diameter: n/a Inches
Filter Pack Interval: n/a

EVENT TYPE

- ☐ Well Development
- ■ Low-Flow / Low-Stress Sampling
- ☐ Well Volume Approach Sampling
- ☐ Other (Specify below)

PURGE INFORMATION

Purge Method: ☐ Bailer ■ Pump
Bailer Type: n/a
Pump Type and Serial #: n/a
Tube/Pump Intake Depth: n/a
Stabilized Pumping Rate: 100 mL/min

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Date/Time (24-Hour)	Depth FT BTOC	Date/Time (24-Hour)
LNAPL	n/a	n/a	n/a	n/a
Groundwater	27.12	1142	27.10	11/9/21 1229
DNAPL	n/a	n/a	n/a	n/a
Casing Base	n/a	n/a	n/a	n/a

Water Level Serial #: M930 #30065

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ■ Well Casing ☐ Borehole
Volume Per Foot: n/a
Standing Water Column: n/a feet
1 Well Volume: n/a Gallons 3 Well Volumes: n/a Gallons
5 Well Volumes: n/a Gallons 10 Well Volumes: n/a Gallons
Total Volumes Produced: n/a Gallons
Well Purged Dry? ☐ Yes ■ No

Water Quality Probe Type and Serial # Aquaball 60a #846000

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (mls)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	1145	0	27.12	0	—	—	—	—	—	—	—
(FE) purge 12	13 ~~1157~~	1200	27.10	0.02	17.95	6.74	5537.4	4.26	61.03	51.6	cloudy/Grey
MJN 12	15 ~~1159~~	1400	27.10	0	17.97	6.73	5539.6	4.25	60.23	51.7	cloudy/Grey
11/9/21 12	17 ~~1201~~	1600	27.10	0	18.00	6.73	5540.7	4.25	61.38	52.1	cloudy/Grey

NOTES

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

Monitoring Well Evaluation Checklist

Site	Newton Prim Ash Pond Unit 501	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	11/9/21			✓	
Well Number	APW9				

Stick-up Monitoring Wells	Yes	No	NA	**Comments**
1. Outer protective Casing				
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose	✓			
2. Inner casing				
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose	✓			
	Yes	No	NA	
3. Are there weep holes in outer casing?		✓		
4. Weep holes able to drain?		✓		
5. Is there a lockable cap present?		✓		
6. Is there a lock present?	✓			
7. Bumper posts in good condition?	✓			

Flushmount Monitoring Wells	Yes	No	NA	
8. Can the lid be secured tightly?			X	
9. Does the lid have a gasket that seals?			X	
10. No water in the flushmount?			X	
11. Is the well cap lockable?			X	
12. Is there a lock present?			X	

All Monitoring Wells	Yes	No	NA	
Downhole Condition				
12. Water level measuring point clearly marked?	✓			
13. No obstructions in well?	✓		✓	
14. No plant roots or vegetation in well?	✓			
15. No sediment in bottom of well?	✓	✓	(✓)	Port pump used b/c ded pump had issues.
If present, how much sediment?	ft			MJN 11/9/21
16. Installed as total depth.	ft			
17. Measured total depth of well.	n/a ft	not measured because pump already installed		

General Condition	Yes	No	NA	
18. Concrete pad installed?	✓			
19 . Concrete pad				
Slope away form casing?	✓			
Not deteriorated?	✓			
Not heaved or below surrounding grade?	✓			
20. No surface seal settling?	✓			
21. Well clearly visible and labeled?	✓			

Comments:

* Major well repair are those that require a subcontractor or separate mobilization to complete

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Newton Primary Ash Pond | Client: RAMBOLL

Project Number: 2285 | Task #: Unit 501 | Start Date: 11/9/2021 | Time: 1341

Field Personnel: AP MN | Finish Date: 11/9/2021 | Time: 1424

WELL INFORMATION

Well ID: APW10

Casing ID: 2 Inches

Screen Interval: n/a

Borehole Diameter: n/a Inches

Filter Pack Interval: n/a

EVENT TYPE

☐ Well Development

■ Low-Flow / Low-Stress Sampling

☐ Well Volume Approach Sampling

☐ Other (Specify below)

PURGE INFORMATION

Purge Method: ☐ Bailer ■ Pump

Bailer Type: n/a

Pump Type and Serial #: n/a

Tube/Pump Intake Depth: n/a

Stabilized Pumping Rate: 100 mL/min

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Date/Time (24-Hour)	Depth FT BTOC	Date/Time (24-Hour)
LNAPL	n/a	n/a	n/a	n/a
Groundwater	18.46	1341	18.46	1424
DNAPL	n/a	n/a	n/a	n/a
Casing Base	n/a	n/a	n/a	n/a

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ■ Well Casing ☐ Borehole

Volume Per Foot: n/a

Standing Water Column: n/a feet

1 Well Volume: n/a Gallons | 3 Well Volumes: n/a Gallons

5 Well Volumes: n/a Gallons | 10 Well Volumes: n/a Gallons

Total Volumes Produced: n/a Gallons

Well Purged Dry? ☐ Yes ■ No

Water Level Serial #: 269860 Solinst model 101 | Water Quality Probe Type and Serial # Aquatroll 600 # 846000

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (mls)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	1341	0	18.46	0	–	–	–	–	–	–	–
purge	1353	1200	18.46	0	–	–	–	–	–	–	–
	1400	1900	18.46	0	14.97	7.44	1556.9	4.34	2.49	61.6	cloudy
	1402	2100	18.46	0	15.01	7.44	1533.7	4.16	6.24	60.2	cloudy
	1404	2300	18.46	0	15.05	7.42	1519.0	3.52	0.00	49.5	cloudy
	1406	2500	18.46	0	14.94	7.37	1566.3	2.08	0.05	37.2	cloudy
	1408	2700	18.46	0	14.96	7.37	1566.9	1.92	0.00	35.3	cloudy
	1410	2900	18.46	0	14.92	7.36	1567.0	1.80	0.00	34.3	cloudy

NOTES

Got extra reads to make sure DO stabilized.

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

Monitoring Well Evaluation Checklist

Site	Newton Prim Ash Pond Unit 501	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	11/4/21			✓	
Well Number	APW10				

Stick-up Monitoring Wells	Yes	No	NA	**Comments**
1. Outer protective Casing	✓			
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose	✓			

	Yes	No	NA	
2. Inner casing	✓			
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose				

	Yes	No	NA	
3. Are there weep holes in outer casing?	✓			
4. Weep holes able to drain?	✓			
5. Is there a lockable cap present?	✓			
6. Is there a lock present?	✓			
7. Bumper posts in good condition?	✓			

Flushmount Monitoring Wells	Yes	No	NA	
8. Can the lid be secured tightly?			X	
9. Does the lid have a gasket that seals?			X	
10. No water in the flushmount?			X	
11. Is the well cap lockable?			X	
12. Is there a lock present?			X	

All Monitoring Wells	Yes	No	NA	
Downhole Condition				
12. Water level measuring point clearly marked?	✓			
13. No obstructions in well?	✓			
14. No plant roots or vegetation in well?	✓			
15. No sediment in bottom of well?	✓			
If present, how much sediment?		ft		
16. Installed as total depth.		ft		
17. Measured total depth of well.		n/a ft		not measured because pump already installed

General Condition	Yes	No	NA	
18. Concrete pad installed?	✓			
19 . Concrete pad				
Slope away form casing?	✓			
Not deteriorated?	✓			
Not heaved or below surrounding grade?	✓			
20. No surface seal settling?	✓			
21. Well clearly visible and labeled?	✓			

Comments: Dedicated Pump was bent + squished down to 6ft in well by previous sampler(s). TOP of tubing under disk is very bent.

* Major well repair are those that require a subcontractor or separate mobilization to complete

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Newton Primary Ash Pond | Client: RAMBOLL

Project Number: 2285 | Task #: Unit 501 | Start Date: 11/10/21 | Time: 1101

Field Personnel: MJN | Finish Date: 11/10/21 | Time: 1135

WELL INFORMATION

Well ID: APW5

Casing ID: 2 Inches

Screen Interval: n/a

Borehole Diameter: n/a Inches

Filter Pack Interval: n/a

EVENT TYPE

- ☐ Well Development
- ■ Low-Flow / Low-Stress Sampling
- ☐ Well Volume Approach Sampling
- ☐ Other (Specify below)

PURGE INFORMATION

Purge Method: ☐ Bailer ■ Pump

Bailer Type: n/a

Pump Type and Serial #: n/a

Tube/Pump Intake Depth: n/a

Stabilized Pumping Rate: 100 mL/min

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Date/Time (24-Hour)	Depth FT BTOC	Date/Time (24-Hour)
LNAPL	n/a	n/a	n/a	n/a
Groundwater	14.76	11/10/21/1101	14.77	11/10/21/1135
DNAPL	n/a	n/a	n/a	n/a
Casing Base	n/a	n/a	n/a	n/a

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ■ Well Casing ☐ Borehole

Volume Per Foot: n/a

Standing Water Column: n/a feet

1 Well Volume: n/a Gallons | 3 Well Volumes: n/a Gallons

5 Well Volumes: n/a Gallons | 10 Well Volumes: n/a Gallons

Total Volumes Produced: n/a Gallons

Well Purged Dry? ☐ Yes ■ No

Water Level Serial #: 269860

Water Quality Probe Type and Serial # AT-846000

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (mls)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH MJN 11/10/21 (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	1101	0	14.76	—	—	~7.48	—	—	—	—	—
purge	1113	1200	14.81	0.05	17.07	~~0.87~~	981.84	0.73	0.00	-94.2	~~cloudy~~ Clear
	1115	1400	14.84	0.03	16.87	7.51	982.55	0.57	0.00	-104.0	Clear
	1117	1600	14.84	0	16.70	7.52	982.17	0.40	0.00	-105.1	Clear
	1119	1800	14.84	0	16.68	7.54	984.00	0.24	0.00	-114.0	Clear

NOTES

MS / MSD / Dup Filled here

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

Monitoring Well Evaluation Checklist

Site	Newton Prim Ash Pond Unit 501	Major wells repairs* required to maintain well integrity?	Yes	No	NA
Inspection Date	11/10/25			✓	
Well Number	APW5				

Stick-up Monitoring Wells	Yes	No	NA	**Comments**
1. Outer protective Casing				
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose	✓			
2. Inner casing				
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose	✓			
	Yes	No	NA	
3. Are there weep holes in outer casing?	✓			
4. Weep holes able to drain?	✓			
5. Is there a lockable cap present?	✓			
6. Is there a lock present?	✓			
7. Bumper posts in good condition?			✓	1/3 are good; 2 dented

Flushmount Monitoring Wells	Yes	No	NA
8. Can the lid be secured tightly?			X
9. Does the lid have a gasket that seals?			X
10. No water in the flushmount?			X
11. Is the well cap lockable?			X
12. Is there a lock present?			X

All Monitoring Wells	Yes	No	NA	
Downhole Condition				
12. Water level measuring point clearly marked?	✓			
13. No obstructions in well?	✓			
14. No plant roots or vegetation in well?	✓			
15. No sediment in bottom of well?	✓			
16. Installed as total depth.	✓			
If present, how much sediment?		ft		
17. Measured total depth of well.		ft		
	n/a	ft		not measured because pump already installed
General Condition				
18. Concrete pad installed?	✓			
19 . Concrete pad				
Slope away form casing?	✓			
Not deteriorated?	✓			
Not heaved or below surrounding grade?	✓			
20. No surface seal settling?	✓			
21. Well clearly visible and labeled?	✓			

Comments:

* Major well repair are those that require a subcontractor or separate mobilization to complete

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Newton Primary Ash Pond
Client: RAMBOLL
Project Number: 2285
Task #: Unit 501
Start Date: 11/10/21 Time: 0954
Field Personnel: MJN
Finish Date: 11/10/21 Time: 1051

WELL INFORMATION

Well ID: APW6
Casing ID: 2 Inches
Screen Interval: n/a
Borehole Diameter: n/a Inches
Filter Pack Interval: n/a

EVENT TYPE

- ☐ Well Development
- ■ Low-Flow / Low-Stress Sampling
- ☐ Well Volume Approach Sampling
- ☐ Other (Specify below)

PURGE INFORMATION

Purge Method: ☐ Bailer ■ Pump
Bailer Type: n/a
Pump Type and Serial #: n/a
Tube/Pump Intake Depth: n/a
Stabilized Pumping Rate: 100 mL/min

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Date/Time (24-Hour)	Depth FT BTOC	Date/Time (24-Hour)
LNAPL	n/a	n/a	n/a	n/a
Groundwater	19.95	11/10/21/1006	19.95	11/10/21
DNAPL	n/a	n/a	n/a	n/a
Casing Base	n/a	n/a	n/a	n/a

Water Level Serial #: 269860

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ■ Well Casing ☐ Borehole
Volume Per Foot: n/a
Standing Water Column: n/a feet
1 Well Volume: n/a Gallons 3 Well Volumes: n/a Gallons
5 Well Volumes: n/a Gallons 10 Well Volumes: n/a Gallons
Total Volumes Produced: n/a Gallons
Well Purged Dry? ☐ Yes ■ No

Water Quality Probe Type and Serial # IT-846000

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (mls)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	1006	0	19.95	—	—	—	—	—	—	—	—
purge	1028	1200	20.06	0.11	16.91	7.43	909.74	2.05	1889.2	-89.6	murky
	1030	1400	20.06	0	16.87	7.46	914.04	0.36	1800.6	-124.1	murky
	1032	1600	20.06	0	16.85	7.50	914.29	0.31	1808.6	-126.8	murky
	1034	1800	20.06	0	16.75	7.52	911.10	0.34	1244.5	-128.7	cloudy
	1036	2000	20.06	0	16.76	7.52	911.20	0.44	977.89	-131.0	cloudy
	1038	2200	20.06	0	16.75	7.52	909.35	0.43	1022.31	-131.4	cloudy

NOTES

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

Monitoring Well Evaluation Checklist

Site	Newton Prim Ash Pond Unit 501	Major wells repairs* required	Yes	No	NA
Inspection Date	11/10/21	to maintain well integrity?		✓	
Well Number	APW6				

Stick-up Monitoring Wells	Yes	No	NA	**Comments**
1. Outer protective Casing	✓			
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose				

	Yes	No	NA	
2. Inner casing	✓			
Not corroded	✓			
Not dented	✓			
Not cracked	✓			
Not loose				

	Yes	No	NA	
3. Are there weep holes in outer casing?		✓		
4. Weep holes able to drain?		✓		
5. Is there a lockable cap present?	✓			
6. Is there a lock present?	✓			
7. Bumper posts in good condition?	✓			

Flushmount Monitoring Wells	Yes	No	NA	
8. Can the lid be secured tightly?			X	
9. Does the lid have a gasket that seals?			X	
10. No water in the flushmount?			X	
11. Is the well cap lockable?			X	
12. Is there a lock present?			X	

All Monitoring Wells	Yes	No	NA	
Downhole Condition	✓			
12. Water level measuring point clearly marked?	✓			
13. No obstructions in well?	✓			
14. No plant roots or vegetation in well?	✓			
15. No sediment in bottom of well?		✓		
If present, how much sediment?	ft			
16. Installed as total depth.	ft			
17. Measured total depth of well.	n/a ft	not measured because pump already installed		

General Condition	Yes	No	NA	
18. Concrete pad installed?	✓			
19 . Concrete pad	✓			
Slope away form casing?	✓			
Not deteriorated?	✓			
Not heaved or below surrounding grade?	✓			
20. No surface seal settling?	✓			
21. Well clearly visible and labeled?				

Comments:

* Major well repair are those that require a subcontractor or separate mobilization to complete

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Newton PAP | Client: RAMBOLL

Project Number: 2285 | Task #: | Start Date: 11/10/21 | Time: 17:15

Field Personnel: Matt Jurilla | Finish Date: 11/10/21 | Time: 17:26

WELL INFORMATION

Well ID: AP1

Casing ID: n/a Inches

Screen Interval: n/a

Borehole Diameter: n/a Inches

Filter Pack Interval: n/a

EVENT TYPE

- ☐ Well Development
- ☐ Low-Flow / Low-Stress Sampling
- ☐ Well Volume Approach Sampling
- x Other (Specify below)

surface water

PURGE INFORMATION

Purge Method: ☐ Bailer ☐ Pump

Bailer Type: n/a

Pump Type and Serial #: n/a

Tube/Pump Intake Depth: n/a

Stabilized Pumping Rate: n/a

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Date/Time (24-Hour)	Depth FT BTOC	Date/Time (24-Hour)
LNAPL	n/a	n/a	n/a	n/a
Groundwater	n/a	n/a	n/a	n/a
DNAPL	n/a	n/a	n/a	n/a
Casing Base	n/a	n/a	n/a	n/a

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ☐ Well Casing ☐ Borehole

Volume Per Foot: n/a

Standing Water Column: n/a feet

1 Well Volume: n/a Gallons | 3 Well Volumes: n/a Gallons

5 Well Volumes: n/a Gallons | 10 Well Volumes: n/a Gallons

Total Volumes Produced: n/a Gallons

Well Purged Dry? ☐ Yes ☐ No

Water Level Serial #: N/A

Water Quality Probe Type and Serial # Aquatroll 600 #762098

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (mls)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	1726	n/a	n/a	n/a	13.25	7.60	594.49	3.49	468.91	-25.0	poor

BMS 11/10/21

NOTES

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

WELL DEVELOPMENT AND GROUNDWATER SAMPLING FIELD FORM

PROJECT INFORMATION

Site: Newton PAP
Client: RAMBOLL
Project Number: 2285
Task #:
Start Date: 11/10/21 Time: 1630
Field Personnel: Matt Julian
Finish Date: 11/10/21 Time: 1656

WELL INFORMATION

Well ID: AP2
Casing ID: n/a Inches
Screen Interval: n/a
Borehole Diameter: n/a Inches
Filter Pack Interval: n/a

EVENT TYPE

- ☐ Well Development
- ☐ Low-Flow / Low-Stress Sampling
- ☐ Well Volume Approach Sampling
- x Other (Specify below)

surface water

PURGE INFORMATION

Purge Method: ☐ Bailer ☐ Pump
Bailer Type: n/a
Pump Type and Serial #: n/a
Tube/Pump Intake Depth: n/a
Stabilized Pumping Rate: n/a

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth FT BTOC	Date/Time (24-Hour)	Depth FT BTOC	Date/Time (24-Hour)
LNAPL	n/a	n/a	n/a	n/a
Groundwater	n/a	n/a	n/a	n/a
DNAPL	n/a	n/a	n/a	n/a
Casing Base	n/a	n/a	n/a	n/a

VOLUME CALCULATION AND PRODUCTION INFORMATION

Volume Calculation Type: ☐ Well Casing ☐ Borehole
Volume Per Foot: n/a
Standing Water Column: n/a feet
1 Well Volume: n/a Gallons 3 Well Volumes: n/a Gallons
5 Well Volumes: n/a Gallons 10 Well Volumes: n/a Gallons
Total Volumes Produced: n/a Gallons
Well Purged Dry? ☐ Yes ☐ No

Water Level Serial #: N/A
Water Quality Probe Type and Serial # Aquatroll 600 # 762098

WATER QUALITY INDICATOR PARAMETERS

Sampling Stage	Time (military)	Volume Removed (mls)	Depth to Water (Feet)	Drawdown (Feet)	Temp (°C)	pH (SU)	SEC or Cond. (µs/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Visual Clarity
initial	16:56	n/a	n/a	n/a	12.26	7.50	584.42	2.11	501.84	-104.4	poor

MAT 11/10/21

NOTES

ABBREVIATIONS

Cond. - Actual Conductivity
FT BTOC - Feet Below Top of Casing
na - Not Applicable
nm - Not Measured
ORP - Oxidation-Reduction Potential
SEC - Specific Electrical Conductance
SU - Standard Units
Temp - Temperature
°C - Degrees Celcius

GK02071

RAMBOLL
234 W. FLORIDA STREET, 5th FLOOR
MILWAUKEE, WI 53204
TEL: 414.837.3607

RAMBOLL - MILWAUKEE
NRT Newton CCR Primary Ash Pond

CHAIN OF CUSTODY # 1

DATE: 11/9/2021

PAGE: 1 OF 1

LABORATORY SAMPLES SUBMITTED TO:
PDC Laboratories, Inc.

ADDRESS:
2231 W Altorfer Drive

CITY:
Peoria, IL 61615

TEL: **309-683-1716** | FAX: **309-692-9689** | E-MAIL: **gschindler@pdclab.com**

CLIENT PROJECT NAME: **Newton Primary Ash Pond**

PROJECT NUMBER / TASK NUMBER: **2285 / Unit 501**

PROJECT CONTACT: **Gail Schindler**

QUOTE NO.:

SAMPLER(S): (SIGNATURE)

TURNAROUND TIME
☐ STANDARD ☐ 24 HR ☐ 48 HR ☒ 5 DAYS

Data Package: **Level 2** Level 4

Preservatives: A = none, B= HCL, C = H_2SO_4, D = HNO_3, E = methanol, F = Sodium Bisulfate, G = zinc acetate, H = other

Preservation Code (pick letter)

Filtered (Yor N)

SPECIAL REQUIREMENTS

REQUESTED ANALYSIS

Method Number and Analytes

LAB USE ONLY	SAMPLE ID	QC SAMPLE	FIELD COMMENTS	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	SAMPLE INTERVAL (ft) TOP	SAMPLE INTERVAL (ft) BOTTOM	#Cont	Filtered (Y or N)	Preservation Code (pick letter)	300.0-Cl,F,SO4	2540C-TDS	6020-B, Ca, K, Mg, Na	2320-Alk CO3, Alk HCO3
	APW 7			11/9	0950	GW	Grab			2	N	A	N	N	N	A
	APW 7 DUP			11/9	0950	GW	Grab			2	N	A	N	N	N	A
	APW 8			11/9	1121	GW	Grab			2	N	A	N	N	N	A
	APW 9			11/9	1229	GW	Grab			2	N	A	N	N	N	A
	APW 10			11/9	1424	GW	Grab			2	N	A	N	N	N	A

Relinquished by: (Signature)	Joseph R Reed	Received by: (Signature)	Joseph R Reed	Date: 11/9/21 Time: 1520
Relinquished by: (Signature)		Received by: (Signature)		Date: 11/9/21 Time: 2024
Relinquished by: (Signature)		Received by: (Signature)		Date: 11/9/21 Time: 2024

4.0

EK025261 -06 KEG

RAMBOLL
234 W. FLORIDA STREET, 5th FLOOR
MILWAUKEE, WI 53204
TEL: 414.837.3607

RAMBOLL - MILWAUKEE
NRT Newton CCR Primary Ash Pond

CHAIN OF CUSTODY # 1
DATE: 11/11/21

PAGE: 1 OF 1

LABORATORY SAMPLES SUBMITTED TO: PDC Laboratories, Inc.			CLIENT PROJECT NAME: Newton Primary Ash Pond
ADDRESS: 2231 W Altorfer Drive			PROJECT CONTACT: Gail Schindler
CITY: Peoria, IL 61615			SAMPLER(S): (SIGNATURE)
TEL: 309-683-1716	FAX: 309-692-9689	E-MAIL: gschindler@pdclab.com	

PROJECT NUMBER / TASK NUMBER: 2285 / Unit 501
QUOTE NO.:

TURNAROUND TIME
☐ STANDARD ☐ 24 HR 48 ☐ 72 HR ☒ 5 DAYS

Data Package: Level 2 Level 4

Preservatives: A = none, B= HCL, C = H_2SO_4, D = HNO_3, E = methanol, F = Sodium Bisulfate, G = zinc acetate, H = other

Preservation Code (pick letter)

Filtered (Y or N)

REQUESTED ANALYSIS

Method Number and Analytes

SPECIAL REQUIREMENTS

LAB USE ONLY	SAMPLE ID	QC SAMPLE	FIELD COMMENTS	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	SAMPLE INTERVAL (ft) TOP	SAMPLE INTERVAL (ft) BOTTOM	#Cont	300.0-Cl,F,SO4	2540C-TDS	6020-B, Ca, K, Mg, Na	2320-Alk CO3, Alk HCO3
	APW 5			11/10/21	1155	GW	Grab			3	X	X	X	X
	APW 6			11/10/21	1051	GW	Grab			2	X	X	X	X
	AP 1			11/10/21	1726	SW	Grab			2	X	X	X	X
	AP 2			11/10/21	1656	SW	Grab			2	X	X	X	X
	Field Blank			11/10/21	1600	DI	Grab			2	X	X	X	X
	Equipment Blank			11/10/21	1605	DI	Grab			2	X	X	X	X

Relinquished by: (Signature)	Received by: (Signature)	Date: 11/11/21	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 11/11/21	Time:
Relinquished by: (Signature)	Received by: (Signature) Kathy Gray	Date: 11/11/21	Time: 1425

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

March 18, 2022

Eric Bauer
Ramboll - Milwaukee
234 W Florida Street, 5th Floor
Milwaukee, WI 53204

Dear Eric Bauer:

Please find enclosed the analytical results for the sample(s) the laboratory received. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of Pace Analytical Services, LLC.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

Pace Analytical Services appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lisa.grant@pacelabs.com.

Sincerely,

Gail J Schindler

Gail Schindler
Project Manager
(309) 692-9688 x1716
gail.schindler@pacelabs.com

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Peoria, IL 61615
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SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order FB04081

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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Work Order FB04358

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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ANALYTICAL RESULTS

Sample: FB04081-01
Name: APW07
Alias: NEW_257_501

Sampled: 02/22/22 11:28
Received: 02/23/22 12:50
Matrix: Ground Water - Grab

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	67	mg/L		03/08/22 02:13	10	10	03/08/22 02:13	CRD	EPA 300.0 REV 2.1
Fluoride	0.458	mg/L		03/08/22 01:54	1	0.250	03/08/22 01:54	CRD	EPA 300.0 REV 2.1
Sulfate	11	mg/L		03/08/22 23:45	10	10	03/08/22 23:45	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	45.84	Feet		02/22/22 11:28	1		02/22/22 11:28	FIELD	Field
Dissolved oxygen, Field	0.68	mg/L		02/22/22 11:28	1		02/22/22 11:28	FIELD	Field
Oxidation Reduction Potential	4.50	mV		02/22/22 11:28	1	-500	02/22/22 11:28	FIELD	Field
pH, Field Measured	7.33	pH Units		02/22/22 11:28	1		02/22/22 11:28	FIELD	Field
Specific Conductance, Field Measured	1070	umhos/cm		02/22/22 11:28	1		02/22/22 11:28	FIELD	Field
Temperature, Field Measured	13.8	°C		02/22/22 11:28	1		02/22/22 11:28	FIELD	Field
Turbidity, Field Measured	143	NTU		02/22/22 11:28	1	0.00	02/22/22 11:28	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	440	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	550	mg/L		02/25/22 08:58	1	26	02/25/22 11:09	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	88	ug/L		02/24/22 09:18	5	10	03/02/22 13:43	JMW	EPA 6020A
Calcium	96	mg/L		02/24/22 09:18	5	0.20	03/02/22 13:43	JMW	EPA 6020A
Magnesium	39	mg/L		02/24/22 09:18	5	0.10	03/02/22 13:43	JMW	EPA 6020A
Potassium	1.9	mg/L		02/24/22 09:18	5	0.10	03/02/22 13:43	JMW	EPA 6020A
Sodium	97	mg/L		02/24/22 09:18	5	0.10	03/03/22 17:16	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FB04081-02
Name: APW07 DUPLICATE
Alias: NEW_257_501

Sampled: 02/22/22 11:28
Received: 02/23/22 12:50
Matrix: Ground Water - Field Duplicate

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	68	mg/L		03/08/22 02:51	10	10	03/08/22 02:51	CRD	EPA 300.0 REV 2.1
Fluoride	0.469	mg/L		03/08/22 02:32	1	0.250	03/08/22 02:32	CRD	EPA 300.0 REV 2.1
Sulfate	11	mg/L		03/09/22 00:23	10	10	03/09/22 00:23	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	45.84	Feet		02/22/22 11:28	1		02/22/22 11:28	FIELD	Field
Dissolved oxygen, Field	0.68	mg/L		02/22/22 11:28	1		02/22/22 11:28	FIELD	Field
Oxidation Reduction Potential	4.50	mV		02/22/22 11:28	1	-500	02/22/22 11:28	FIELD	Field
pH, Field Measured	7.33	pH Units		02/22/22 11:28	1		02/22/22 11:28	FIELD	Field
Specific Conductance, Field Measured	1070	umhos/cm		02/22/22 11:28	1		02/22/22 11:28	FIELD	Field
Temperature, Field Measured	13.8	°C		02/22/22 11:28	1		02/22/22 11:28	FIELD	Field
Turbidity, Field Measured	143	NTU		02/22/22 11:28	1	0.00	02/22/22 11:28	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	440	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	550	mg/L		02/25/22 08:58	1	26	02/25/22 11:09	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	87	ug/L		02/24/22 09:18	5	10	03/02/22 13:47	JMW	EPA 6020A
Calcium	96	mg/L		02/24/22 09:18	5	0.20	03/02/22 13:47	JMW	EPA 6020A
Magnesium	39	mg/L		02/24/22 09:18	5	0.10	03/02/22 13:47	JMW	EPA 6020A
Potassium	1.8	mg/L		02/24/22 09:18	5	0.10	03/02/22 13:47	JMW	EPA 6020A
Sodium	99	mg/L		02/24/22 09:18	5	0.10	03/03/22 17:19	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FB04081-04
Name: APW08
Alias: NEW_257_501

Sampled: 02/22/22 12:14
Received: 02/23/22 12:50
Matrix: Ground Water - Grab

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	54	mg/L		03/08/22 03:29	10	10	03/08/22 03:29	CRD	EPA 300.0 REV 2.1
Fluoride	0.499	mg/L		03/08/22 03:10	1	0.250	03/08/22 03:10	CRD	EPA 300.0 REV 2.1
Sulfate	49	mg/L		03/09/22 00:42	10	10	03/09/22 00:42	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	36.6	Feet		02/22/22 12:14	1		02/22/22 12:14	FIELD	Field
Dissolved oxygen, Field	0.37	mg/L		02/22/22 12:14	1		02/22/22 12:14	FIELD	Field
Oxidation Reduction Potential	-93.8	mV		02/22/22 12:14	1	-500	02/22/22 12:14	FIELD	Field
pH, Field Measured	7.39	pH Units		02/22/22 12:14	1		02/22/22 12:14	FIELD	Field
Specific Conductance, Field Measured	1173	umhos/cm		02/22/22 12:14	1		02/22/22 12:14	FIELD	Field
Temperature, Field Measured	13.9	°C		02/22/22 12:14	1		02/22/22 12:14	FIELD	Field
Turbidity, Field Measured	12.5	NTU		02/22/22 12:14	1	0.00	02/22/22 12:14	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	480	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	660	mg/L		02/25/22 08:58	1	26	02/25/22 11:09	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	90	ug/L		02/24/22 09:18	5	10	03/02/22 13:50	JMW	EPA 6020A
Calcium	110	mg/L		02/24/22 09:18	5	0.20	03/02/22 13:50	JMW	EPA 6020A
Magnesium	45	mg/L		02/24/22 09:18	5	0.10	03/02/22 13:50	JMW	EPA 6020A
Potassium	1.9	mg/L		02/24/22 09:18	5	0.10	03/02/22 13:50	JMW	EPA 6020A
Sodium	93	mg/L		02/24/22 09:18	5	0.10	03/03/22 17:22	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FB04081-05
Name: APW05
Alias: NEW_257_501

Sampled: 02/22/22 13:01
Received: 02/23/22 12:50
Matrix: Ground Water - Grab

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	50	mg/L	Q4	03/09/22 17:20	10	10	03/09/22 17:20	CRD	EPA 300.0 REV 2.1
Fluoride	0.321	mg/L		03/09/22 15:49	1	0.250	03/09/22 15:49	CRD	EPA 300.0 REV 2.1
Sulfate	< 1.0	mg/L		03/09/22 15:49	1	1.0	03/09/22 15:49	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	14.1	Feet		02/22/22 13:01	1		02/22/22 13:01	FIELD	Field
Dissolved oxygen, Field	0.59	mg/L		02/22/22 13:01	1		02/22/22 13:01	FIELD	Field
Oxidation Reduction Potential	-69.9	mV		02/22/22 13:01	1	-500	02/22/22 13:01	FIELD	Field
pH, Field Measured	7.65	pH Units		02/22/22 13:01	1		02/22/22 13:01	FIELD	Field
Specific Conductance, Field Measured	977.1	umhos/cm		02/22/22 13:01	1		02/22/22 13:01	FIELD	Field
Temperature, Field Measured	14.0	°C		02/22/22 13:01	1		02/22/22 13:01	FIELD	Field
Turbidity, Field Measured	< 0.00	NTU		02/22/22 13:01	1	0.00	02/22/22 13:01	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	440	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	470	mg/L		02/25/22 08:58	1	26	02/25/22 11:09	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	110	ug/L		02/24/22 09:18	5	10	03/02/22 13:54	JMW	EPA 6020A
Calcium	51	mg/L		02/24/22 09:18	5	0.20	03/02/22 13:54	JMW	EPA 6020A
Magnesium	29	mg/L		02/24/22 09:18	5	0.10	03/02/22 13:54	JMW	EPA 6020A
Potassium	1.6	mg/L		02/24/22 09:18	5	0.10	03/02/22 13:54	JMW	EPA 6020A
Sodium	140	mg/L		02/24/22 09:18	5	0.10	03/03/22 17:30	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FB04081-06
Name: APW06
Alias: NEW_257_501

Sampled: 02/22/22 13:28
Received: 02/23/22 12:50
Matrix: Ground Water - Grab

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	26	mg/L		03/09/22 17:56	10	10	03/09/22 17:56	CRD	EPA 300.0 REV 2.1
Fluoride	0.389	mg/L		03/09/22 17:38	1	0.250	03/09/22 17:38	CRD	EPA 300.0 REV 2.1
Sulfate	7.6	mg/L		03/09/22 17:38	1	1.0	03/09/22 17:38	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	19.42	Feet		02/22/22 13:28	1		02/22/22 13:28	FIELD	Field
Dissolved oxygen, Field	0.74	mg/L		02/22/22 13:28	1		02/22/22 13:28	FIELD	Field
Oxidation Reduction Potential	-19.2	mV		02/22/22 13:28	1	-500	02/22/22 13:28	FIELD	Field
pH, Field Measured	7.59	pH Units		02/22/22 13:28	1		02/22/22 13:28	FIELD	Field
Specific Conductance, Field Measured	916.0	umhos/cm		02/22/22 13:28	1		02/22/22 13:28	FIELD	Field
Temperature, Field Measured	14.6	°C		02/22/22 13:28	1		02/22/22 13:28	FIELD	Field
Turbidity, Field Measured	4.99	NTU		02/22/22 13:28	1	0.00	02/22/22 13:28	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	420	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	450	mg/L		03/01/22 13:04	1	26	03/01/22 15:04	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	100	ug/L		02/24/22 09:18	5	10	03/03/22 10:53	JMW	EPA 6020A
Calcium	56	mg/L		02/24/22 09:18	5	0.20	03/02/22 15:10	JMW	EPA 6020A
Magnesium	28	mg/L		02/24/22 09:18	5	0.10	03/02/22 15:10	JMW	EPA 6020A
Potassium	1.8	mg/L		02/24/22 09:18	5	0.10	03/02/22 15:10	JMW	EPA 6020A
Sodium	130	mg/L		02/24/22 09:18	5	0.10	03/03/22 10:53	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FB04081-09
Name: APW09
Alias: NEW_257_501

Sampled: 02/22/22 13:59
Received: 02/23/22 12:50
Matrix: Ground Water - Grab

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	140	mg/L		03/09/22 18:32	25	25	03/09/22 18:32	CRD	EPA 300.0 REV 2.1
Fluoride	0.270	mg/L		03/09/22 18:14	1	0.250	03/09/22 18:14	CRD	EPA 300.0 REV 2.1
Sulfate	8.4	mg/L		03/09/22 18:14	1	1.0	03/09/22 18:14	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	25.74	Feet		02/22/22 13:59	1		02/22/22 13:59	FIELD	Field
Dissolved oxygen, Field	9.8	mg/L		02/22/22 13:59	1		02/22/22 13:59	FIELD	Field
Oxidation Reduction Potential	103	mV		02/22/22 13:59	1	-500	02/22/22 13:59	FIELD	Field
pH, Field Measured	7.70	pH Units		02/22/22 13:59	1		02/22/22 13:59	FIELD	Field
Specific Conductance, Field Measured	1201	umhos/cm		02/22/22 13:59	1		02/22/22 13:59	FIELD	Field
Temperature, Field Measured	13.7	°C		02/22/22 13:59	1		02/22/22 13:59	FIELD	Field
Turbidity, Field Measured	12.5	NTU		02/22/22 13:59	1	0.00	02/22/22 13:59	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	520	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	820	mg/L		03/01/22 13:04	1	26	03/01/22 15:04	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	120	ug/L		02/24/22 09:18	5	10	03/03/22 10:57	JMW	EPA 6020A
Calcium	82	mg/L		02/24/22 09:18	5	0.20	03/02/22 15:14	JMW	EPA 6020A
Magnesium	42	mg/L		02/24/22 09:18	5	0.10	03/02/22 15:14	JMW	EPA 6020A
Potassium	1.8	mg/L		02/24/22 09:18	5	0.10	03/02/22 15:14	JMW	EPA 6020A
Sodium	200	mg/L		02/24/22 09:18	5	0.10	03/03/22 10:57	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FB04081-10
Name: APW10
Alias: NEW_257_501

Sampled: 02/22/22 11:58
Received: 02/23/22 12:50
Matrix: Ground Water - Grab

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	48	mg/L		03/09/22 19:26	10	10	03/09/22 19:26	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		03/09/22 19:08	1	0.250	03/09/22 19:08	CRD	EPA 300.0 REV 2.1
Sulfate	410	mg/L		03/09/22 20:20	100	100	03/09/22 20:20	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	16.94	Feet		02/22/22 11:58	1		02/22/22 11:58	FIELD	Field
Dissolved oxygen, Field	0.28	mg/L		02/22/22 11:58	1		02/22/22 11:58	FIELD	Field
Oxidation Reduction Potential	142	mV		02/22/22 11:58	1	-500	02/22/22 11:58	FIELD	Field
pH, Field Measured	7.31	pH Units		02/22/22 11:58	1		02/22/22 11:58	FIELD	Field
Specific Conductance, Field Measured	1590	umhos/cm		02/22/22 11:58	1		02/22/22 11:58	FIELD	Field
Temperature, Field Measured	13.4	°C		02/22/22 11:58	1		02/22/22 11:58	FIELD	Field
Turbidity, Field Measured	2.56	NTU		02/22/22 11:58	1	0.00	02/22/22 11:58	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	360	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/24/22 08:38	1	10	02/24/22 08:38	ADM/JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	1100	mg/L		03/01/22 13:04	1	26	03/01/22 15:04	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	91	ug/L		02/24/22 09:18	5	10	03/03/22 11:00	JMW	EPA 6020A
Calcium	140	mg/L		02/24/22 09:18	5	0.20	03/02/22 15:17	JMW	EPA 6020A
Magnesium	71	mg/L		02/24/22 09:18	5	0.10	03/02/22 15:17	JMW	EPA 6020A
Potassium	1.6	mg/L		02/24/22 09:18	5	0.10	03/02/22 15:17	JMW	EPA 6020A
Sodium	130	mg/L		02/24/22 09:18	5	0.10	03/03/22 11:00	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FB04358-01
Name: XPW01
Alias: NEW_257_501

Sampled: 02/23/22 14:38
Received: 02/24/22 22:53
Matrix: Ground Water - Grab

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	25	mg/L		02/25/22 17:50	10	10	02/25/22 17:50	CRD	EPA 300.0 REV 2.1
Sulfate	9300	mg/L		02/25/22 18:08	2500	2500	02/25/22 18:08	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	10.43	Feet		02/23/22 14:38	1		02/23/22 14:38	FIELD	Field
Dissolved oxygen, Field	0.090	mg/L		02/23/22 14:38	1		02/23/22 14:38	FIELD	Field
Oxidation Reduction Potential	-357	mV		02/23/22 14:38	1	-500	02/23/22 14:38	FIELD	Field
pH, Field Measured	12.6	pH Units		02/23/22 14:38	1		02/23/22 14:38	FIELD	Field
Specific Conductance, Field Measured	2167	umhos/cm		02/23/22 14:38	1		02/23/22 14:38	FIELD	Field
Temperature, Field Measured	9.1	°C		02/23/22 14:38	1		02/23/22 14:38	FIELD	Field
Turbidity, Field Measured	81.0	NTU		02/23/22 14:38	1	0.00	02/23/22 14:38	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 10	mg/L		03/01/22 08:52	1	10	03/01/22 08:52	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	520	mg/L		03/01/22 08:52	1	10	03/01/22 08:52	ADM/JAA	SM 2320B 1997
Fluoride	3.55	mg/L		03/07/22 11:25	1	0.250	03/07/22 11:25	TTH	SM 4500F C 1997
Solids - total dissolved solids (TDS)	15000	mg/L		03/01/22 13:04	1	51	03/01/22 15:04	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	12000	ug/L		02/28/22 09:05	100	200	03/02/22 10:09	JMW	EPA 6020A
Calcium	33	mg/L		02/28/22 09:05	5	0.20	03/01/22 12:59	JMW	EPA 6020A
Magnesium	0.98	mg/L		02/28/22 09:05	5	0.10	03/01/22 12:59	JMW	EPA 6020A
Potassium	96	mg/L		02/28/22 09:05	5	0.10	03/01/22 12:59	JMW	EPA 6020A
Sodium	4900	mg/L		02/28/22 09:05	100	2.0	03/01/22 15:54	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FB04358-02
Name: XPW02
Alias: NEW_257_501

Sampled: 02/23/22 16:12
Received: 02/24/22 22:53
Matrix: Ground Water - Grab

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	12	mg/L		02/25/22 19:21	10	10	02/25/22 19:21	CRD	EPA 300.0 REV 2.1
Fluoride	0.314	mg/L		02/25/22 18:27	1	0.250	02/25/22 18:27	CRD	EPA 300.0 REV 2.1
Sulfate	210	mg/L		02/25/22 19:39	100	100	02/25/22 19:39	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	6.46	Feet		02/23/22 16:12	1		02/23/22 16:12	FIELD	Field
Dissolved oxygen, Field	0.94	mg/L		02/23/22 16:12	1		02/23/22 16:12	FIELD	Field
Oxidation Reduction Potential	-233	mV		02/23/22 16:12	1	-500	02/23/22 16:12	FIELD	Field
pH, Field Measured	9.54	pH Units		02/23/22 16:12	1		02/23/22 16:12	FIELD	Field
Specific Conductance, Field Measured	595.4	umhos/cm		02/23/22 16:12	1		02/23/22 16:12	FIELD	Field
Temperature, Field Measured	9.2	°C		02/23/22 16:12	1		02/23/22 16:12	FIELD	Field
Turbidity, Field Measured	49.9	NTU		02/23/22 16:12	1	0.00	02/23/22 16:12	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	2.0	mg/L		03/02/22 14:36	1	2.0	03/02/22 14:36	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	37	mg/L		03/02/22 14:36	1	2.0	03/02/22 14:36	ADM/JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	360	mg/L		02/28/22 11:16	1	26	02/28/22 12:31	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	2400	ug/L		02/28/22 09:05	5	10	03/01/22 13:03	JMW	EPA 6020A
Calcium	40	mg/L		02/28/22 09:05	5	0.20	03/01/22 13:03	JMW	EPA 6020A
Magnesium	1.2	mg/L		02/28/22 09:05	5	0.10	03/01/22 13:03	JMW	EPA 6020A
Potassium	18	mg/L		02/28/22 09:05	5	0.10	03/01/22 13:03	JMW	EPA 6020A
Sodium	70	mg/L	Q4	02/28/22 09:05	5	0.10	03/01/22 13:03	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FB04358-03
Name: XPW03
Alias: NEW_257_501

Sampled: 02/23/22 16:20
Received: 02/24/22 22:53
Matrix: Ground Water - Grab

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	13	mg/L		02/25/22 20:15	10	10	02/25/22 20:15	CRD	EPA 300.0 REV 2.1
Fluoride	0.978	mg/L		02/25/22 19:57	1	0.250	02/25/22 19:57	CRD	EPA 300.0 REV 2.1
Sulfate	130	mg/L		02/25/22 20:33	50	50	02/25/22 20:33	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	9.63	Feet		02/23/22 16:20	1		02/23/22 16:20	FIELD	Field
Dissolved oxygen, Field	0.70	mg/L		02/23/22 16:20	1		02/23/22 16:20	FIELD	Field
Oxidation Reduction Potential	-210	mV		02/23/22 16:20	1	-500	02/23/22 16:20	FIELD	Field
pH, Field Measured	11.3	pH Units		02/23/22 16:20	1		02/23/22 16:20	FIELD	Field
Specific Conductance, Field Measured	940.8	umhos/cm		02/23/22 16:20	1		02/23/22 16:20	FIELD	Field
Temperature, Field Measured	13.3	°C		02/23/22 16:20	1		02/23/22 16:20	FIELD	Field
Turbidity, Field Measured	210	NTU		02/23/22 16:20	1	0.00	02/23/22 16:20	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 10	mg/L		03/02/22 14:36	1	10	03/02/22 14:36	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	85	mg/L		03/02/22 14:36	1	10	03/02/22 14:36	ADM/JAA	SM 2320B 1997
Solids - total dissolved solids (TDS)	420	mg/L		02/28/22 11:16	1	26	02/28/22 12:31	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	1700	ug/L		02/28/22 09:05	5	10	03/01/22 13:13	JMW	EPA 6020A
Calcium	33	mg/L		02/28/22 09:05	5	0.20	03/01/22 13:13	JMW	EPA 6020A
Magnesium	0.41	mg/L		02/28/22 09:05	5	0.10	03/01/22 13:13	JMW	EPA 6020A
Potassium	15	mg/L		02/28/22 09:05	5	0.10	03/01/22 13:13	JMW	EPA 6020A
Sodium	110	mg/L		02/28/22 09:05	5	0.10	03/01/22 13:13	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FB04358-04
Name: XPW04
Alias: NEW_257_501

Sampled: 02/23/22 16:59
Received: 02/24/22 22:53
Matrix: Ground Water - Grab

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	30	mg/L		02/25/22 21:09	10	10	02/25/22 21:09	CRD	EPA 300.0 REV 2.1
Sulfate	1800	mg/L		02/25/22 21:27	250	250	02/25/22 21:27	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	11.58	Feet		02/23/22 16:59	1		02/23/22 16:59	FIELD	Field
Dissolved oxygen, Field	0.41	mg/L		02/23/22 16:59	1		02/23/22 16:59	FIELD	Field
Oxidation Reduction Potential	-315	mV		02/23/22 16:59	1	-500	02/23/22 16:59	FIELD	Field
pH, Field Measured	9.51	pH Units		02/23/22 16:59	1		02/23/22 16:59	FIELD	Field
Specific Conductance, Field Measured	3281	umhos/cm		02/23/22 16:59	1		02/23/22 16:59	FIELD	Field
Temperature, Field Measured	14.6	°C		02/23/22 16:59	1		02/23/22 16:59	FIELD	Field
Turbidity, Field Measured	20.4	NTU		02/23/22 16:59	1	0.00	02/23/22 16:59	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	80	mg/L		03/02/22 14:36	1	10	03/02/22 14:36	ADM/JAA	SM 2320B 1997
Alkalinity - carbonate as CaCO3	60	mg/L		03/02/22 14:36	1	10	03/02/22 14:36	ADM/JAA	SM 2320B 1997
Fluoride	0.683	mg/L		03/07/22 13:44	1	0.250	03/07/22 13:44	TTH	SM 4500F C 1997
Solids - total dissolved solids (TDS)	2900	mg/L		02/28/22 11:16	1	26	02/28/22 12:31	JLC1/ADM	SM 2540C
Total Metals - PIA									
Boron	2200	ug/L		02/28/22 09:05	5	10	03/01/22 13:17	JMW	EPA 6020A
Calcium	68	mg/L		02/28/22 09:05	5	0.20	03/01/22 13:17	JMW	EPA 6020A
Magnesium	1.7	mg/L		02/28/22 09:05	5	0.10	03/01/22 13:17	JMW	EPA 6020A
Potassium	34	mg/L		02/28/22 09:05	5	0.10	03/01/22 13:17	JMW	EPA 6020A
Sodium	700	mg/L		02/28/22 09:05	100	2.0	03/01/22 15:57	JMW	EPA 6020A

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B225332 - SW 3015 - EPA 6020A									
Blank (B225332-BLK1)				Prepared: 02/24/22 Analyzed: 03/02/22					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B225332-BS1)				Prepared: 02/24/22 Analyzed: 03/02/22					
Boron	546	ug/L		555.6		98	80-120		
Calcium	6.48	mg/L		5.556		117	80-120		
Magnesium	6.66	mg/L		5.556		120	80-120		
Potassium	6.56	mg/L		5.556		118	80-120		
Sodium	6.41	mg/L		5.556		115	80-120		
Batch B225418 - No Prep - SM 2540C									
Blank (B225418-BLK1)				Prepared & Analyzed: 02/25/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B225418-BS1)				Prepared & Analyzed: 02/25/22					
Solids - total dissolved solids (TDS)	953	mg/L		1000		95	84.9-109		
Batch B225464 - No Prep - SM 2320B 1997									
Blank (B225464-BLK1)				Prepared & Analyzed: 02/24/22					
Alkalinity - carbonate as CaCO3	< 2.0	mg/L							
Blank (B225464-BLK2)				Prepared & Analyzed: 02/24/22					
Alkalinity - carbonate as CaCO3	< 2.0	mg/L							
Batch B225465 - No Prep - SM 2320B 1997									
Blank (B225465-BLK1)				Prepared & Analyzed: 02/24/22					
Alkalinity - bicarbonate as CaCO3	2.50	mg/L							
Blank (B225465-BLK2)				Prepared & Analyzed: 02/24/22					
Alkalinity - bicarbonate as CaCO3	7.50	mg/L							
Batch B225527 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B225527-CCB1)				Prepared & Analyzed: 02/25/22					
Fluoride	0.00	mg/L							
Sulfate	0.0436	mg/L							
Chloride	0.251	mg/L							
Calibration Check (B225527-CCV1)				Prepared & Analyzed: 02/25/22					
Chloride	4.81	mg/L		5.000		96	90-110		
Fluoride	5.05	mg/L		5.000		101	90-110		
Sulfate	4.92	mg/L		5.000		98	90-110		
Batch B225555 - SW 3015 - EPA 6020A									

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B225555 - SW 3015 - EPA 6020A									
Blank (B225555-BLK1)				Prepared: 02/28/22 Analyzed: 03/01/22					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B225555-BS1)				Prepared: 02/28/22 Analyzed: 03/01/22					
Boron	455	ug/L		555.6		82	80-120		
Calcium	5.80	mg/L		5.556		104	80-120		
Magnesium	6.60	mg/L		5.556		119	80-120		
Potassium	6.60	mg/L		5.556		119	80-120		
Sodium	5.80	mg/L		5.556		104	80-120		
Matrix Spike (B225555-MS1)	**Sample: FB04358-02**			Prepared: 02/28/22 Analyzed: 03/01/22					
Boron	2830	ug/L		555.6	2360	85	75-125		
Calcium	45.7	mg/L		5.556	39.9	104	75-125		
Magnesium	7.70	mg/L		5.556	1.19	117	75-125		
Potassium	24.3	mg/L		5.556	18.3	108	75-125		
Sodium	73.7	mg/L	Q4	5.556	70.5	59	75-125		
Matrix Spike Dup (B225555-MSD1)	**Sample: FB04358-02**			Prepared: 02/28/22 Analyzed: 03/01/22					
Boron	2780	ug/L		555.6	2360	76	75-125	2	20
Calcium	45.8	mg/L		5.556	39.9	105	75-125	0.2	20
Magnesium	7.71	mg/L		5.556	1.19	117	75-125	0.1	20
Potassium	24.6	mg/L		5.556	18.3	114	75-125	1	20
Sodium	73.6	mg/L	Q4	5.556	70.5	56	75-125	0.2	20
Batch B225586 - No Prep - SM 2540C									
Blank (B225586-BLK1)				Prepared & Analyzed: 02/28/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B225586-BS1)				Prepared & Analyzed: 02/28/22					
Solids - total dissolved solids (TDS)	987	mg/L		1000		99	84.9-109		
Batch B225705 - No Prep - SM 2540C									
Blank (B225705-BLK1)				Prepared & Analyzed: 03/01/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B225705-BS1)				Prepared & Analyzed: 03/01/22					
Solids - total dissolved solids (TDS)	933	mg/L		1000		93	84.9-109		
Batch B225780 - No Prep - SM 2320B 1997									
Blank (B225780-BLK1)				Prepared & Analyzed: 03/01/22					
Alkalinity - bicarbonate as CaCO3	2.50	mg/L							
Blank (B225780-BLK2)				Prepared & Analyzed: 03/01/22					
Alkalinity - bicarbonate as CaCO3	2.50	mg/L							
Blank (B225780-BLK3)				Prepared & Analyzed: 03/01/22					
Alkalinity - bicarbonate as CaCO3	7.50	mg/L							
LCS (B225780-BS1)				Prepared & Analyzed: 03/01/22					

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B225780 - No Prep - SM 2320B 1997									
LCS (B225780-BS1)				Prepared & Analyzed: 03/01/22					
Alkalinity - bicarbonate as CaCO3	85.0	mg/L					90-110		
LCS (B225780-BS2)				Prepared & Analyzed: 03/01/22					
Alkalinity - bicarbonate as CaCO3	85.0	mg/L					90-110		
LCS (B225780-BS3)				Prepared & Analyzed: 03/01/22					
Alkalinity - bicarbonate as CaCO3	80.0	mg/L					90-110		
Duplicate (B225780-DUP1)	**Sample: FB04358-01**			Prepared & Analyzed: 03/01/22					
Alkalinity - bicarbonate as CaCO3	< 10	mg/L			ND				10
Batch B225782 - No Prep - SM 2320B 1997									
Blank (B225782-BLK1)				Prepared & Analyzed: 03/01/22					
Alkalinity - carbonate as CaCO3	2.50	mg/L							
Blank (B225782-BLK2)				Prepared & Analyzed: 03/01/22					
Alkalinity - carbonate as CaCO3	2.50	mg/L							
Blank (B225782-BLK3)				Prepared & Analyzed: 03/01/22					
Alkalinity - carbonate as CaCO3	2.50	mg/L							
Duplicate (B225782-DUP1)	**Sample: FB04358-01**			Prepared & Analyzed: 03/01/22					
Alkalinity - carbonate as CaCO3	550	mg/L			525			5	10
Batch B225916 - No Prep - SM 2320B 1997									
Blank (B225916-BLK1)				Prepared & Analyzed: 03/02/22					
Alkalinity - bicarbonate as CaCO3	< 2.0	mg/L							
LCS (B225916-BS1)				Prepared & Analyzed: 03/02/22					
Alkalinity - bicarbonate as CaCO3	82.5	mg/L					90-110		
Duplicate (B225916-DUP1)	**Sample: FB04358-03**			Prepared & Analyzed: 03/02/22					
Alkalinity - bicarbonate as CaCO3	< 10	mg/L			ND				10
Batch B225917 - No Prep - SM 2320B 1997									
Blank (B225917-BLK1)				Prepared & Analyzed: 03/02/22					
Alkalinity - carbonate as CaCO3	< 2.0	mg/L							
Duplicate (B225917-DUP1)	**Sample: FB04358-03**			Prepared & Analyzed: 03/02/22					
Alkalinity - carbonate as CaCO3	85.0	mg/L			85.0			0	10
Batch B226200 - No Prep - SM 4500F C 1997									
Calibration Blank (B226200-CCB1)				Prepared & Analyzed: 03/07/22					
Fluoride	0.00900	mg/L							
Calibration Blank (B226200-CCB2)				Prepared & Analyzed: 03/07/22					
Fluoride	0.0110	mg/L							
Calibration Check (B226200-CCV1)				Prepared & Analyzed: 03/07/22					
Fluoride	0.723	mg/L		0.7000		103	90-110		
Calibration Check (B226200-CCV2)				Prepared & Analyzed: 03/07/22					
Fluoride	0.724	mg/L		0.7000		103	90-110		
Batch B226312 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B226312-CCB1)				Prepared & Analyzed: 03/07/22					

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Peoria, IL 61615
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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B226312 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B226312-CCB1)				Prepared & Analyzed: 03/07/22					
Chloride	0.0670	mg/L							
Fluoride	0.00	mg/L							
Calibration Check (B226312-CCV1)				Prepared & Analyzed: 03/07/22					
Chloride	4.56	mg/L		5.000		91	90-110		
Fluoride	4.84	mg/L		5.000		97	90-110		
Batch B226470 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B226470-CCB1)				Prepared & Analyzed: 03/08/22					
Sulfate	0.00	mg/L							
Calibration Check (B226470-CCV1)				Prepared & Analyzed: 03/08/22					
Sulfate	5.33	mg/L		5.000		107	90-110		
Batch B226602 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B226602-CCB1)				Prepared & Analyzed: 03/09/22					
Sulfate	0.0564	mg/L							
Fluoride	0.00	mg/L							
Chloride	0.00	mg/L							
Calibration Blank (B226602-CCB2)				Prepared & Analyzed: 03/09/22					
Sulfate	0.0339	mg/L							
Fluoride	0.00	mg/L							
Chloride	0.00	mg/L							
Calibration Check (B226602-CCV1)				Prepared & Analyzed: 03/09/22					
Sulfate	5.13	mg/L		5.000		103	90-110		
Chloride	5.01	mg/L		5.000		100	90-110		
Fluoride	5.19	mg/L		5.000		104	90-110		
Calibration Check (B226602-CCV2)				Prepared & Analyzed: 03/09/22					
Sulfate	4.81	mg/L		5.000		96	90-110		
Fluoride	4.92	mg/L		5.000		98	90-110		
Chloride	4.72	mg/L		5.000		94	90-110		
Matrix Spike (B226602-MS1)	**Sample: FB04081-05**			Prepared & Analyzed: 03/09/22					
Chloride	1.0E9	mg/L	Q4	1.500	50	NR	80-120		
Fluoride	1.71	mg/L		1.500	0.321	93	80-120		
Sulfate	2.31	mg/L		1.500	0.830	99	80-120		
Matrix Spike Dup (B226602-MSD1)	**Sample: FB04081-05**			Prepared & Analyzed: 03/09/22					
Fluoride	1.82	mg/L		1.500	0.321	100	80-120	6	20
Chloride	1.0E9	mg/L	Q4	1.500	50	NR	80-120	0	20
Sulfate	2.38	mg/L		1.500	0.830	104	80-120	3	20

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NOTES

Specifications regarding method revisions, method modifications, and calculations used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050
TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615
TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)
Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)
Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807
USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050
Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

Q4 The matrix spike recovery result is unusable since the analyte concentration in the sample is greater than four times the spike level. The associated blank spike was acceptable.

Gail J Schindler

Certified by: Gail Schindler, Project Manager

NEWTON CCR PRIMARY ASH POND

WELL/SAMPLE POINT: APW05 | Purge Method: Low flow

Date: 2/22/22 | Start Time: 1237 | Finish/Sample Time: 1301

Well Depth (Bottom) From MP:	63.51 ft	Min. Purge Volume:	1.5 Gal / (L)
Depth to Water From MP:	14.10 ft	Total Purge Volume:	1.7 Gal / (L)
Water Column Length:	49.41 ft	Max Drawdown:	— ft
Well Water Volume:	30.0 Gal / (L)	Total Drawdown:	0.10 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1257	14.10	150	—	—	—	—	—	—
2	1247	14.20	150	7.65	985.08	13.99	-55.7	0.59	0.00
3	1248	14.20	150	7.65	984.89	13.97	-60.6	0.57	0.00
4	1249	14.20	150	7.65	977.12	13.95	-69.9	0.59	0.00
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: YSI-600, 846000

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☒ Slight ☐ Mod. ☐ Strong

Turb: ☒ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
2	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
	General (P, 250 mL)
1	General (P, 1000mL)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 14.20 ft

Comments: DUPE INCLUDED

Sampler's Signature: [signature]

NEWTON CCR PRIMARY ASH POND

WELL/SAMPLE POINT APW06 **Purge Method:** Low flow/Electric Pump

Date: 2/22/22 Start Time: 1309 Finish/Sample Time: 1328

Well Depth (Bottom) From MP: 66.82 ft Min. Purge Volume: 1.5 Gal (L)

Depth to Water From MP: 19.42 ft Total Purge Volume: 1.7 Gal (L)

Water Column Length: 47.40 ft Max Drawdown: — ft

Well Water Volume: 28.67 Gal (L) Total Drawdown: 0.12 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1317	19.54	175	7.59	914.96	14.61	-13.2	0.90	4.92
2	1318	19.54	175	7.59	915.26	14.57	-17.1	0.81	4.94
3	1319	19.54	175	7.59	916.02	14.58	-19.2	0.74	4.99
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: ~~YSI~~ EXT-600, 846000

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☒ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
	General (P, 250 mL)
1	General (P, 1000 mL)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 19.54 ft

Comments

Sampler's Signature:

NEWTON CCR PRIMARY ASH POND

WELL/SAMPLE POINT APW07 **Purge Method:** Low flow

Date: 2/22/22 Start Time: 1047 Finish/Sample Time: 1128

Well Depth (Bottom) From MP: 81.05 ft Min. Purge Volume: 1.5 Gal (L)

Depth to Water From MP: 45.84 ft Total Purge Volume: 1.5 Gal (L)

Water Column Length: 35.21 ft Max Drawdown: — ft

Well Water Volume: 21.30 Gal (L) Total Drawdown: 0.02 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1047	45.84	100	—	—	—	—	—	—
2	1100	45.82	100	7.30	1082.9	13.74	21.2	0.67	147.87
3	1101	45.82	100	7.31	1006.0	13.75	13.8	0.67	137.23
4	1102	45.82	100	7.33	1069.8	13.76	4.50	0.68	142.89
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT-600, 846000

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☒ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
2	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
	General (P, 250 mL)
2	General (P, 1000 mL)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 45.82 ft

Comments DUPES INCLUDED

Sampler's Signature:

NEWTON CCR PRIMARY ASH POND

WELL/SAMPLE POINT APW08 **Purge Method:** Low flow

Date: 2/22/22 Start Time: 1152 Finish/Sample Time: 1214

Well Depth (Bottom) From MP: 76.75 ft Min. Purge Volume: 1.5 Gal (L)

Depth to Water From MP: 36.60 ft Total Purge Volume: 1.8 Gal (L)

Water Column Length: 40.15 ft Max Drawdown: — ft

Well Water Volume: 24.3 Gal (L) Total Drawdown: 0.00 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1152	36.60	150	—	—	—	—	—	—
2	1205	36.60	150	7.38	1164.1	13.95	-84.2	0.40	11.30
3	1206	36.60	150	7.39	1164.9	13.94	-87.2	0.39	11.22
4	1207	36.60	150	7.39	1173.2	13.94	-93.8	0.37	12.48
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT600 - 846000

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☒ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	**Bottles**
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
	General (P, 250 mL)
1	General (P, 1000 mL)

Filtered	
Qty	**Bottles**
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 36.60 ft

Comments

Sampler's Signature:

NEWTON CCR PRIMARY ASH POND

WELL/SAMPLE POINT: APW09 Purge Method: Bladder pump / low flow

Date: 2/2/22 Start Time: 13:00 Finish/Sample Time: 13:59

Well Depth (Bottom) From MP: ft Min. Purge Volume: Gal / L

Depth to Water From MP: 25.74 ft Total Purge Volume: 2.4 Gal (L)

Water Column Length: 42 ft Max Drawdown: ft

Well Water Volume: Gal / L Total Drawdown: 0.01 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	13:21	25.72	100	7.66	1190.0	13.40	138.7	9.71	16.57
2	13:23	25.74	100	7.69	1283.0	13.81	109.6	10.75	~~40.7~~ 110.0
3	13:25	25.75	100	7.70	1208.1	13.76	108.2	9.99	35.22
4	13:27	25.75	100	7.70	1200.7	13.70	102.9	9.80	12.46
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT600 762098

Sample Appearance:

Odor: ☐ None ☑ Slight ☐ Mod. ☐ Strong

Color ☐ None ☑ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☑ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes		X

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, ~~250mL~~ 1000mL)
2	General P, 500

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 25.75 ft

Comments: Won't hold pressure, water drops right back down. Also no discharge tube... Mislabled bottle

Sampler's Signature:

NEWTON CCR PRIMARY ASH POND

WELL/SAMPLE POINT APW10 **Purge Method:** Bladder pump/low flow

Date: 2/22/22 Start Time: 11:12 Finish/Sample Time: 11:58

Well Depth (Bottom) From MP: _____ ft Min. Purge Volume: _____ Gal / L

Depth to Water From MP: 16.94 ft Total Purge Volume: 2.2 Gal / (L)

Water Column Length: _____ ft Max Drawdown: _____ ft

Well Water Volume: _____ Gal / L Total Drawdown: _____ ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	11:32	16.98	100	7.33	1590.9	13.44	141.6	0.83	5.47
2	11:34	16.99	100	7.32	1589.0	13.37	141.4	0.38	3.95
3	11:36	16.98	100	7.32	1590.7	13.37	141.9	0.34	2.89
4	11:38	16.98	100	7.31	1590.0	13.35	141.8	0.28	2.56
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT600 762098

Sample Appearance:

Odor: ☑ None ☐ Slight ☐ Mod. ☐ Strong

Color ☑ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☑ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely	X	
Good seal/drainage	Y	
Well has weep holes		X

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, ~~250 mL~~) 1000mL
1	General P, U, 500mL

Filtered	
Qty	Bottles
6	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 17.03 ft

Comments

Sampler's Signature: [signature]

NEWTON CCR PRIMARY ASH POND

WELL/SAMPLE POINT XPW01 **Purge Method:** bladder

Date: 2/23/2022 Start Time: 1354 Finish/Sample Time: 1438

Well Depth (Bottom) From MP: _____ ft

Depth to Water From MP: 10.43 ft

Water Column Length: _____ ft

Well Water Volume: _____ Gal / L

Min. Purge Volume: ~ Gal / L

Total Purge Volume: 12.00 Gal / L (mL)

Max Drawdown: ~ ft

Total Drawdown: 0 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1402	10.43	100	~	~	~	~	~	~
2	1414	10.43	100	12.53	2220.1	8.98	-362.7	0.11	70.73
3	1416	10.43	100	12.56	2191.3	8.78	-358.8	0.10	63.10
4	1418	10.43	100	12.59	2166.6	9.11	-357.0	0.09	50.95
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT 600 # 762215

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☒ Slight ☒ Mod. ☐ Strong

Turb: ☐ None ☒ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes		X

App 2/23/22

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, ~~250 mL~~) 1000mL

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 10.43 ft

Comments DTW tape - Solinst model 101 # 336216

Sampler's Signature:

NEWTON CCR PRIMARY ASH POND

WELL/SAMPLE POINT: XPW02 Purge Method: bladder

Date: 2/23/2022 Start Time: 1508 Finish/Sample Time: 1612

Well Depth (Bottom) From MP: ____ ft Min. Purge Volume: — Gal / L

Depth to Water From MP: 6.46 ft Total Purge Volume: 1200 Gal / L (m2)

Water Column Length: ____ ft Max Drawdown: — ft

Well Water Volume: ____ Gal / L Total Drawdown: ____ ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1538	6.46	100	—	—	—	—	—	—
2	1550	6.55	100	9.54	597.81	9.00	-227.3	1.11	65.36
3	1552	6.55	100	9.55	597.84	9.08	-230.5	1.00	54.03
4	1554	6.55	100	9.54	595.39	9.16	-232.6	0.94	49.88
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: A7600 762215

Sample Appearance:

Odor: ☐ None ☒ Slight ☐ Mod. ☐ Strong

Color ☐ None ☒ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☒ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes		X

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, ~~250 mL~~) 1000mL

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 6.55 ft

Comments: DTW Tape - Scissor motel 101 #336216

Sampler's Signature:

NEWTON CCR PRIMARY ASH POND

WELL/SAMPLE POINT: XPW03 | Purge Method: Bladder Pump

Date: 2/23/22 | Start Time: 1543 | Finish/Sample Time: 1620

Well Depth (Bottom) From MP: _____ ft | Min. Purge Volume: _____ Gal / L

Depth to Water From MP: 9.63 ft | Total Purge Volume: 2.1 Gal / L

Water Column Length: _____ ft | Max Drawdown: _____ ft

Well Water Volume: _____ Gal / L | Total Drawdown: 0.0 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		(ft.)	(mL/min)	(s.u.)	(umhos/cm)	(deg C)	(mV)	(mg/L)	(NTU)
1	1558	9.63	100	11.31	92625	13.35	-215.3	0.71	269.38
2	1600	9.63	100	11.32	93631	13.30	-205.9	0.66	209.91
3	1602	9.63	100	11.31	94081	13.33	-210.2	0.70	210.11
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT 600

Sample Appearance:

Odor: ☐ None ☐ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☐ Slight ☒ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, ~~250mL~~) 1000mL

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 9.63 ft

Comments

Sampler's Signature: Joseph R Pack

NEWTON CCR PRIMARY ASH POND

WELL/SAMPLE POINT: XPW04 Purge Method: Bladder Pump

Date: 2/23/22 Start Time: 1624 Finish/Sample Time: 1659

Well Depth (Bottom) From MP: _____ ft Min. Purge Volume: _____ Gal / L

Depth to Water From MP: 11.58 ft Total Purge Volume: 2.1 Gal (L)

Water Column Length: _____ ft Max Drawdown: _____ ft

Well Water Volume: _____ Gal / L Total Drawdown: 0.01 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1640	11.58	100	9.47	3289.2	14.64	-310.1	0.45	25.74
2	1642	11.58	100	9.50	3270.5	14.59	-312.5	0.43	23.55
3	1644	11.58	100	9.51	3281.2	14.61	-316.4	0.41	20.44
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT 600

Sample Appearance:

Odor: ☐ None ☐ Slight ☒ Mod. ☐ Strong

Color: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☒ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, ~~500mL~~) 1000mL

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 11.59 ft

Comments

Sampler's Signature: Joseph R Rad

FB04358

RAMBOLL
234 W. FLORIDA STREET, 5th FLOOR
MILWAUKEE, WI 53204
TEL: 414.837.3607

RAMBOLL - MILWAUKEE
NRT Newton CCR Primary Ash Pond

CHAIN OF CUSTODY # 1
DATE: 2/24/22
PAGE: 1 OF 1

LABORATORY SAMPLES SUBMITTED TO:
Pace Analytical Services
ADDRESS:
2231 W Altorfer Drive
CITY:
Peoria, IL 61615
TEL: **309-683-1716** FAX: **309-692-9689** E-MAIL: gschindler@pdclab.com

CLIENT PROJECT NAME: **Newton Primary Ash Pond**
PROJECT NUMBER / TASK NUMBER: **2285 / Unit 501**
PROJECT CONTACT: **Gail Schindler**
QUOTE NO.:
SAMPLER(S): (SIGNATURE)

TURNAROUND TIME
☐ STANDARD ☐ 24 HR ☐ 48 HR ☐ 2 HR ☒ 5 DAYS

Data Package: Level 2 Level 4

Preservatives: A = none, B= HCL, C = H_2SO_4, D = HNO_3, E = methanol, F = Sodium Bisulfate, G = zinc acetate, H = other

Preservation Code (pick letter)

Filtered (Yor N)

REQUESTED ANALYSIS

Method Number and Analytes

	A	A	D	A																			
	N	N	N	N																			
	300.0-Cl,F,SO4	2540C-TDS	6020-B, Ca, K, Mg, Na	2320-Alk CO3, Alk HCO3																			

SPECIAL REQUIREMENTS

LAB USE ONLY	SAMPLE ID	QC SAMPLE	FIELD COMMENTS	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	SAMPLE INTERVAL (ft) TOP	SAMPLE INTERVAL (ft) BOTTOM	#Cont
	XPW01			2/23/22	1438	GW	Grab			2
	XPW02			2/23/22	1612	GW	Grab			2
	XPW03			2/23/22	1620	GW	Grab			2
	XPW04			2/23/22	1659	GW	Grab			2

Relinquished by: (Signature)	Received by: (Signature)	Date: 2/24/22	Time: 2245
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 2/24/22	Time: 2245

2.1 2/25/22 7:50

FB04081

RAMBOLL
234 W. FLORIDA STREET, 5th FLOOR
MILWAUKEE, WI 53204
TEL: 414.837.3607

RAMBOLL - MILWAUKEE
NRT Newton CCR Primary Ash Pond

CHAIN OF CUSTODY #
DATE: 2/22/22
PAGE: ____ OF ____

LABORATORY SAMPLES SUBMITTED TO: **Pace Analytical Services**
ADDRESS: **2231 W Altorfer Drive**
CITY: **Peoria, IL 61615**
TEL: **309-683-1716**
FAX: **309-692-9689**
E-MAIL: gschindler@pdclab.com

CLIENT PROJECT NAME: **Newton Primary Ash Pond**
PROJECT NUMBER / TASK NUMBER: **2285 / Unit 501**
QUOTE NO.:
PROJECT CONTACT: **Gail Schindler**
SAMPLER(S): (SIGNATURE) Joseph R Reed

TURNAROUND TIME
☐ STANDARD ☐ 24 HR 48 ☐ ☐ HR ☒ 5 DAYS

Data Package: Level 2 Level 4

Preservatives: A = none, B= HCL, C = H_2SO_4, D = HNO_3, E = methanol, F = Sodium Bisulfate, G = zinc acetate, H = other

SPECIAL REQUIREMENTS

REQUESTED ANALYSIS
Method Number and Analytes

LAB USE ONLY	SAMPLE ID	QC SAMPLE	FIELD COMMENTS	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	SAMPLE INTERVAL (ft) TOP	BOTTOM	#Cont	300.0-Cl,F,SO4	2540C-TDS	6020-B, Ca, K, Mg, Na	2320-Alk CO3, Alk HCO3
Preservation Code (pick letter)											A	A	D	A
Filtered (Y or N)											N	N	N	N
	APW-07			2/22/22	1128	GW	GW							
	APW-2				1146									
	APW-08				1214									
	APW-05				1301									
	APW-06				1328									
	APW 3				1435									
	APW-4				1230									
	APW-09				1359									
	APW-10				1158									

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Joseph R Reed		2/23/22	700
	[signature]	2/23/22	1250

2.6

FB040481

RAMBOLL
234 W. FLORIDA STREET, 5th FLOOR
MILWAUKEE, WI 53204
TEL: 414.837.3607

RAMBOLL - MILWAUKEE
NRT Newton CCR Primary Ash Pond

CHAIN OF CUSTODY #
DATE: 2/22/22
PAGE: _____ OF _____

LABORATORY SAMPLES SUBMITTED TO:
Pace Analytical Services
ADDRESS:
2231 W Altorfer Drive
CITY:
Peoria, IL 61615
TEL: **309-683-1716**
FAX: **309-692-9689**
E-MAIL: **gschindler@pdclab.com**

CLIENT PROJECT NAME: **Newton Primary Ash Pond**
PROJECT NUMBER / TASK NUMBER: **2285 / Unit 501**
PROJECT CONTACT: **Gail Schindler**
QUOTE NO.:
SAMPLER(S): (SIGNATURE) Joseph R Rad

TURNAROUND TIME
☐ STANDARD ☐ 24 HR 48☐ ☐ HR ☒ 5 DAYS

Data Package: **Level 2** Level 4

Preservatives: A = none, B= HCL, C = H_2SO_4, D = HNO_3, E = methanol, F = Sodium Bisulfate, G = zinc acetate, H = other

Preservation Code (pick letter)
Filtered (Yor N)

REQUESTED ANALYSIS

Method Number and Analytes

	A	A	D	A
	N	N	N	N
	300.0-Cl,F,SO4	2540C-TDS	6020-B, Ca, K, Mg, Na	2320-Alk CO3, Alk HCO3

SPECIAL REQUIREMENTS

LAB USE ONLY	SAMPLE ID	QC SAMPLE	FIELD COMMENTS	SAMPLE DATE	SAMPLE TIME	MATRIX	SAMPLE TYPE	SAMPLE INTERVAL (ft) TOP	SAMPLE INTERVAL (ft) BOTTOM	#Cont
	APW-07			2/22/22	1129	GW	GW			
	APW-2				1146					
	APW-08				1214					
	APW-05				1301					
	APW-06				1328					
	APW-3				1435					
	APW-4				1230					
	APW-09				1359					
	APW-10				1155					

not required

not required 95 2/23/22

Relinquished by: (Signature) Joseph R Rad	Received by: (Signature)	Date: 2/23/22	Time: 700
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: 2/23/22	Time: 1250

2.6

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

September 09, 2022

Terry Hanratty
Vistra - Newton
Newton Energy Center 6725 N. 500th St
Newton, IL 62448

Dear Terry Hanratty:

Please find enclosed the **revised** analytical results for the **17** sample(s) the laboratory received on **6/16/22 9:40 am** and logged in under work order **FF03208**. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of Pace Analytical Services, LLC.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

Pace Analytical Services appreciates the opportunity to provide you with analytical expertise . We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lisa.grant@pacelabs.com.

Gail J Schindler

Gail Schindler
Project Manager
(309) 692-9688 x1716
gail.schindler@pacelabs.com

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order FF03208

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

ANALYTICAL RESULTS

Sample: FF03208-05
Name: APW05
Alias: NEW_257_501

Sampled: 06/15/22 12:00
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	0.634	pCi/L			1	0.482			904.0 903.0

Sample: FF03208-06
Name: APW06
Alias: NEW_257_501

Sampled: 06/14/22 15:34
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	0.263 J	pCi/L			1	0.483			904.0 903.0

Sample: FF03208-07
Name: APW07
Alias: NEW_257_501

Sampled: 06/14/22 15:15
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	1.24	pCi/L			1	0.465			904.0 903.0

Sample: FF03208-08
Name: APW08
Alias: NEW_257_501

Sampled: 06/14/22 16:07
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	1.06	pCi/L			1	0.448			904.0 903.0

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ANALYTICAL RESULTS

Sample: FF03208-09
Name: APW09
Alias: NEW_257_501

Sampled: 06/15/22 13:01
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	1.01	pCi/L			1	0.444			904.0 903.0

Sample: FF03208-10
Name: APW10
Alias: NEW_257_501

Sampled: 06/15/22 13:03
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	0.264 J	pCi/L			1	0.537			904.0 903.0

ANALYTICAL RESULTS

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

ANALYTICAL RESULTS

Sample: FF03208-01
Name: XPW01
Alias: NEW_257_501

Sampled: 06/14/22 15:13
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	14	mg/L		06/27/22 14:21	10	10	06/27/22 14:21	CJP	EPA 300.0 REV 2.1
Sulfate	6100	mg/L		06/27/22 14:39	2500	2500	06/27/22 14:39	CJP	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	11.49	Feet		06/14/22 15:13	1		06/14/22 15:13	FIELD	Field
Dissolved oxygen, Field	0.0	mg/L		06/14/22 15:13	1		06/14/22 15:13	FIELD	Field
Oxidation Reduction Potential	-374	mV		06/14/22 15:13	1	-500	06/14/22 15:13	FIELD	Field
pH, Field Measured	12.5	pH Units		06/14/22 15:13	1		06/14/22 15:13	FIELD	Field
Specific Conductance, Field Measured	16190	umhos/cm		06/14/22 15:13	1		06/14/22 15:13	FIELD	Field
Temperature, Field Measured	18.9	°C		06/14/22 15:13	1		06/14/22 15:13	FIELD	Field
Turbidity, Field Measured	9.91	NTU		06/14/22 15:13	1	0.00	06/14/22 15:13	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 10	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Alkalinity - carbonate as CaCO3	500	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Solids - total dissolved solids (TDS)	11000	mg/L		06/17/22 15:29	1	34	06/17/22 16:49	CGL	SM 2540C
Total Metals - PIA									
Calcium	20	mg/L		06/27/22 08:41	5	0.20	06/28/22 11:23	JMW	EPA 6020A
Magnesium	0.42	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:23	JMW	EPA 6020A
Potassium	64	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:23	JMW	EPA 6020A
Sodium	3400	mg/L		06/27/22 08:41	100	2.0	06/30/22 10:35	JMW	EPA 6020A

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

ANALYTICAL RESULTS

Sample: FF03208-02
Name: XPW02
Alias: NEW_257_501

Sampled: 06/14/22 16:02
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	8.6	mg/L		06/27/22 15:15	5	5.0	06/27/22 15:15	CJP	EPA 300.0 REV 2.1
Sulfate	170	mg/L		06/27/22 16:09	100	100	06/27/22 16:09	CJP	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	7.88	Feet		06/14/22 16:02	1		06/14/22 16:02	FIELD	Field
Dissolved oxygen, Field	0.22	mg/L		06/14/22 16:02	1		06/14/22 16:02	FIELD	Field
Oxidation Reduction Potential	-262	mV		06/14/22 16:02	1	-500	06/14/22 16:02	FIELD	Field
pH, Field Measured	10.1	pH Units		06/14/22 16:02	1		06/14/22 16:02	FIELD	Field
Specific Conductance, Field Measured	523.0	umhos/cm		06/14/22 16:02	1		06/14/22 16:02	FIELD	Field
Temperature, Field Measured	20.6	°C		06/14/22 16:02	1		06/14/22 16:02	FIELD	Field
Turbidity, Field Measured	6.03	NTU		06/14/22 16:02	1	0.00	06/14/22 16:02	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 10	mg/L		06/24/22 14:15	1	10	06/24/22 14:15	CWW	SM 2320B 1997
Alkalinity - carbonate as CaCO3	45	mg/L		06/24/22 14:15	1	10	06/24/22 14:15	CWW	SM 2320B 1997
Solids - total dissolved solids (TDS)	400	mg/L		06/17/22 15:29	1	26	06/17/22 16:49	CGL	SM 2540C
Total Metals - PIA									
Calcium	30	mg/L		06/27/22 08:41	5	0.20	06/28/22 11:27	JMW	EPA 6020A
Magnesium	0.28	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:27	JMW	EPA 6020A
Potassium	16	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:27	JMW	EPA 6020A
Sodium	61	mg/L		06/27/22 08:41	5	0.10	06/30/22 09:20	JMW	EPA 6020A

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

ANALYTICAL RESULTS

Sample: FF03208-03
Name: XPW03
Alias: NEW_257_501

Sampled: 06/15/22 10:40
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	11	mg/L		06/28/22 14:20	5	5.0	06/28/22 14:20	CJP	EPA 300.0 REV 2.1
Sulfate	150	mg/L		06/27/22 17:03	50	50	06/27/22 17:03	CJP	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	10.72	Feet		06/15/22 10:40	1		06/15/22 10:40	FIELD	Field
Dissolved oxygen, Field	0.27	mg/L		06/15/22 10:40	1		06/15/22 10:40	FIELD	Field
Oxidation Reduction Potential	-264	mV		06/15/22 10:40	1	-500	06/15/22 10:40	FIELD	Field
pH, Field Measured	11.3	pH Units		06/15/22 10:40	1		06/15/22 10:40	FIELD	Field
Specific Conductance, Field Measured	966.4	umhos/cm		06/15/22 10:40	1		06/15/22 10:40	FIELD	Field
Temperature, Field Measured	18.3	°C		06/15/22 10:40	1		06/15/22 10:40	FIELD	Field
Turbidity, Field Measured	300	NTU		06/15/22 10:40	1	0.00	06/15/22 10:40	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 10	mg/L		06/24/22 14:15	1	10	06/24/22 14:15	CWW	SM 2320B 1997
Alkalinity - carbonate as CaCO3	65	mg/L		06/24/22 14:15	1	10	06/24/22 14:15	CWW	SM 2320B 1997
Solids - total dissolved solids (TDS)	490	mg/L		06/20/22 13:04	1	26	06/20/22 15:19	CGL	SM 2540C
Total Metals - PIA									
Calcium	35	mg/L		06/27/22 08:41	5	0.20	06/28/22 11:30	JMW	EPA 6020A
Magnesium	0.24	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:30	JMW	EPA 6020A
Potassium	14	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:30	JMW	EPA 6020A
Sodium	100	mg/L		06/27/22 08:41	5	0.10	06/30/22 09:23	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FF03208-04
Name: XPW04
Alias: NEW_257_501

Sampled: 06/15/22 10:17
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	50	mg/L		06/27/22 17:21	10	10	06/27/22 17:21	CJP	EPA 300.0 REV 2.1
Sulfate	7500	mg/L		06/28/22 14:38	1000	1000	06/28/22 14:38	CJP	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	11.69	Feet		06/15/22 10:17	1		06/15/22 10:17	FIELD	Field
Dissolved oxygen, Field	0.40	mg/L		06/15/22 10:17	1		06/15/22 10:17	FIELD	Field
Oxidation Reduction Potential	-332	mV		06/15/22 10:17	1	-500	06/15/22 10:17	FIELD	Field
pH, Field Measured	11.8	pH Units		06/15/22 10:17	1		06/15/22 10:17	FIELD	Field
Specific Conductance, Field Measured	13120	umhos/cm		06/15/22 10:17	1		06/15/22 10:17	FIELD	Field
Temperature, Field Measured	19.9	°C		06/15/22 10:17	1		06/15/22 10:17	FIELD	Field
Turbidity, Field Measured	40.1	NTU		06/15/22 10:17	1	0.00	06/15/22 10:17	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 10	mg/L		06/24/22 14:15	1	10	06/24/22 14:15	CWW	SM 2320B 1997
Alkalinity - carbonate as CaCO3	150	mg/L		06/24/22 14:15	1	10	06/24/22 14:15	CWW	SM 2320B 1997
Solids - total dissolved solids (TDS)	11000	mg/L		06/21/22 15:36	1	51	06/21/22 16:52	CGL	SM 2540C
Total Metals - PIA									
Calcium	120	mg/L		06/27/22 08:41	5	0.20	06/28/22 11:34	JMW	EPA 6020A
Magnesium	0.25	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:34	JMW	EPA 6020A
Potassium	84	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:34	JMW	EPA 6020A
Sodium	3400	mg/L		06/27/22 08:41	100	2.0	06/30/22 10:39	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FF03208-05
Name: APW05
Alias: NEW_257_501

Sampled: 06/15/22 12:00
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	45	mg/L	Q4	06/27/22 18:52	10	10	06/27/22 18:52	CJP	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/27/22 17:58	1	0.250	06/27/22 17:58	CJP	EPA 300.0 REV 2.1
Sulfate	< 1.0	mg/L		06/27/22 17:58	1	1.0	06/27/22 17:58	CJP	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	14.45	Feet		06/15/22 12:00	1		06/15/22 12:00	FIELD	Field
Dissolved oxygen, Field	0.21	mg/L		06/15/22 12:00	1		06/15/22 12:00	FIELD	Field
Oxidation Reduction Potential	-138	mV		06/15/22 12:00	1	-500	06/15/22 12:00	FIELD	Field
pH, Field Measured	7.54	pH Units		06/15/22 12:00	1		06/15/22 12:00	FIELD	Field
Specific Conductance, Field Measured	924.4	umhos/cm		06/15/22 12:00	1		06/15/22 12:00	FIELD	Field
Temperature, Field Measured	19.2	°C		06/15/22 12:00	1		06/15/22 12:00	FIELD	Field
Turbidity, Field Measured	9.57	NTU		06/15/22 12:00	1	0.00	06/15/22 12:00	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	450	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Solids - total dissolved solids (TDS)	590	mg/L		06/20/22 13:04	1	26	06/20/22 15:19	CGL	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/27/22 08:41	5	3.0	06/28/22 11:38	JMW	EPA 6020A
Arsenic	20	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:38	JMW	EPA 6020A
Barium	250	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:38	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:38	JMW	EPA 6020A
Boron	140	ug/L		06/27/22 08:41	5	10	06/28/22 11:38	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:38	JMW	EPA 6020A
Calcium	51	mg/L		06/27/22 08:41	5	0.20	06/28/22 11:38	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/27/22 08:41	5	4.0	06/28/22 11:38	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/27/22 08:41	5	2.0	06/28/22 11:38	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:38	JMW	EPA 6020A
Magnesium	28	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:38	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/27/22 08:41	5	0.20	06/28/22 11:38	JMW	EPA 6020A
Molybdenum	11	ug/L		06/27/22 08:41	5	1.0	06/30/22 09:31	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FF03208-05
Name: APW05
Alias: NEW_257_501

Sampled: 06/15/22 12:00
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Potassium	1.5	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:38	JMW	EPA 6020A
Selenium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:38	JMW	EPA 6020A
Sodium	120	mg/L		06/27/22 08:41	5	0.10	06/30/22 09:31	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:38	JMW	EPA 6020A
Lithium	< 20	ug/L		06/27/22 08:41	1	20	06/28/22 11:13	TJJ	EPA 6010B

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ANALYTICAL RESULTS

Sample: FF03208-06
Name: APW06
Alias: NEW_257_501

Sampled: 06/14/22 15:34
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	21	mg/L	Q4	06/27/22 20:40	5	5.0	06/27/22 20:40	CJP	EPA 300.0 REV 2.1
Fluoride	0.296	mg/L		06/27/22 19:46	1	0.250	06/27/22 19:46	CJP	EPA 300.0 REV 2.1
Sulfate	11	mg/L	Q4	06/27/22 20:40	5	5.0	06/27/22 20:40	CJP	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	19.39	Feet		06/14/22 15:34	1		06/14/22 15:34	FIELD	Field
Dissolved oxygen, Field	1.5	mg/L		06/14/22 15:34	1		06/14/22 15:34	FIELD	Field
Oxidation Reduction Potential	-108	mV		06/14/22 15:34	1	-500	06/14/22 15:34	FIELD	Field
pH, Field Measured	7.47	pH Units		06/14/22 15:34	1		06/14/22 15:34	FIELD	Field
Specific Conductance, Field Measured	934.5	umhos/cm		06/14/22 15:34	1		06/14/22 15:34	FIELD	Field
Temperature, Field Measured	23.1	°C		06/14/22 15:34	1		06/14/22 15:34	FIELD	Field
Turbidity, Field Measured	789	NTU		06/14/22 15:34	1	0.00	06/14/22 15:34	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	370	mg/L		06/24/22 14:15	1	10	06/24/22 14:15	CWW	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/24/22 14:15	1	10	06/24/22 14:15	CWW	SM 2320B 1997
Solids - total dissolved solids (TDS)	560	mg/L		06/17/22 15:29	1	26	06/17/22 16:49	CGL	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/27/22 08:41	5	3.0	06/28/22 11:41	JMW	EPA 6020A
Arsenic	6.9	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:41	JMW	EPA 6020A
Barium	240	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:41	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:41	JMW	EPA 6020A
Boron	110	ug/L		06/27/22 08:41	5	10	06/28/22 11:41	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:41	JMW	EPA 6020A
Calcium	59	mg/L		06/27/22 08:41	5	0.20	06/28/22 11:41	JMW	EPA 6020A
Chromium	4.4	ug/L		06/27/22 08:41	5	4.0	06/28/22 11:41	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/27/22 08:41	5	2.0	06/28/22 11:41	JMW	EPA 6020A
Lead	2.2	ug/L		07/05/22 09:40	5	1.0	07/06/22 09:39	JMW	EPA 6020A
Magnesium	28	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:41	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/27/22 08:41	5	0.20	06/28/22 11:41	JMW	EPA 6020A
Molybdenum	7.2	ug/L		06/27/22 08:41	5	1.0	06/30/22 10:05	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FF03208-06
Name: APW06
Alias: NEW_257_501

Sampled: 06/14/22 15:34
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Potassium	1.9	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:41	JMW	EPA 6020A
Selenium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:41	JMW	EPA 6020A
Sodium	110	mg/L		06/27/22 08:41	5	0.10	06/30/22 10:05	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:41	JMW	EPA 6020A
Lithium	< 20	ug/L		06/27/22 08:41	1	20	06/28/22 11:15	TJJ	EPA 6010B

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ANALYTICAL RESULTS

Sample: FF03208-07
Name: APW07
Alias: NEW_257_501

Sampled: 06/14/22 15:15
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	64	mg/L		06/27/22 21:16	10	10	06/27/22 21:16	CJP	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/27/22 21:16	1	0.250	06/27/22 20:58	CJP	EPA 300.0 REV 2.1
Sulfate	12	mg/L		06/27/22 21:16	10	10	06/27/22 21:16	CJP	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	46.48	Feet		06/14/22 15:15	1		06/14/22 15:15	FIELD	Field
Dissolved oxygen, Field	2.3	mg/L		06/14/22 15:15	1		06/14/22 15:15	FIELD	Field
Oxidation Reduction Potential	-91.7	mV		06/14/22 15:15	1	-500	06/14/22 15:15	FIELD	Field
pH, Field Measured	7.36	pH Units		06/14/22 15:15	1		06/14/22 15:15	FIELD	Field
Specific Conductance, Field Measured	1037	umhos/cm		06/14/22 15:15	1		06/14/22 15:15	FIELD	Field
Temperature, Field Measured	18.7	°C		06/14/22 15:15	1		06/14/22 15:15	FIELD	Field
Turbidity, Field Measured	29.8	NTU		06/14/22 15:15	1	0.00	06/14/22 15:15	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	300	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Solids - total dissolved solids (TDS)	530	mg/L		06/17/22 15:29	1	26	06/17/22 16:49	CGL	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/27/22 08:41	5	3.0	06/28/22 11:45	JMW	EPA 6020A
Arsenic	12	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:45	JMW	EPA 6020A
Barium	500	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:45	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:45	JMW	EPA 6020A
Boron	110	ug/L		06/27/22 08:41	5	10	06/28/22 11:45	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:45	JMW	EPA 6020A
Calcium	93	mg/L		06/27/22 08:41	5	0.20	06/28/22 11:45	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/27/22 08:41	5	4.0	06/28/22 11:45	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/27/22 08:41	5	2.0	06/28/22 11:45	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:45	JMW	EPA 6020A
Magnesium	37	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:45	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/27/22 08:41	5	0.20	06/28/22 11:45	JMW	EPA 6020A
Molybdenum	1.5	ug/L		06/27/22 08:41	5	1.0	06/30/22 10:09	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FF03208-07
Name: APW07
Alias: NEW_257_501

Sampled: 06/14/22 15:15
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Potassium	1.6	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:45	JMW	EPA 6020A
Selenium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:45	JMW	EPA 6020A
Sodium	84	mg/L		06/27/22 08:41	5	0.10	06/30/22 10:09	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:45	JMW	EPA 6020A
Lithium	< 20	ug/L		06/27/22 08:41	1	20	06/28/22 11:17	TJJ	EPA 6010B

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ANALYTICAL RESULTS

Sample: FF03208-08
Name: APW08
Alias: NEW_257_501

Sampled: 06/14/22 16:07
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	54	mg/L		06/27/22 21:53	10	10	06/27/22 21:53	CJP	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/27/22 21:53	1	0.250	06/27/22 21:34	CJP	EPA 300.0 REV 2.1
Sulfate	42	mg/L		06/27/22 21:53	10	10	06/27/22 21:53	CJP	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	37.29	Feet		06/14/22 16:07	1		06/14/22 16:07	FIELD	Field
Dissolved oxygen, Field	0.68	mg/L		06/14/22 16:07	1		06/14/22 16:07	FIELD	Field
Oxidation Reduction Potential	-139	mV		06/14/22 16:07	1	-500	06/14/22 16:07	FIELD	Field
pH, Field Measured	7.40	pH Units		06/14/22 16:07	1		06/14/22 16:07	FIELD	Field
Specific Conductance, Field Measured	1079	umhos/cm		06/14/22 16:07	1		06/14/22 16:07	FIELD	Field
Temperature, Field Measured	17.5	°C		06/14/22 16:07	1		06/14/22 16:07	FIELD	Field
Turbidity, Field Measured	5.09	NTU		06/14/22 16:07	1	0.00	06/14/22 16:07	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	450	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Solids - total dissolved solids (TDS)	620	mg/L		06/17/22 15:29	1	26	06/17/22 16:49	CGL	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/27/22 08:41	5	3.0	06/28/22 11:49	JMW	EPA 6020A
Arsenic	19	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:49	JMW	EPA 6020A
Barium	460	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:49	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:49	JMW	EPA 6020A
Boron	100	ug/L		06/27/22 08:41	5	10	06/28/22 11:49	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:49	JMW	EPA 6020A
Calcium	110	mg/L		06/27/22 08:41	5	0.20	06/28/22 11:49	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/27/22 08:41	5	4.0	06/28/22 11:49	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/27/22 08:41	5	2.0	06/28/22 11:49	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:49	JMW	EPA 6020A
Magnesium	44	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:49	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/27/22 08:41	5	0.20	06/28/22 11:49	JMW	EPA 6020A
Molybdenum	3.8	ug/L		06/27/22 08:41	5	1.0	06/30/22 10:13	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FF03208-08
Name: APW08
Alias: NEW_257_501

Sampled: 06/14/22 16:07
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Potassium	2.0	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:49	JMW	EPA 6020A
Selenium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:49	JMW	EPA 6020A
Sodium	79	mg/L		06/27/22 08:41	5	0.10	06/30/22 10:13	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:49	JMW	EPA 6020A
Lithium	< 20	ug/L		06/27/22 08:41	1	20	06/28/22 11:19	TJJ	EPA 6010B

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ANALYTICAL RESULTS

Sample: FF03208-09
Name: APW09
Alias: NEW_257_501

Sampled: 06/15/22 13:01
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	130	mg/L		06/27/22 22:29	25	25	06/27/22 22:29	CJP	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/27/22 22:11	1	0.250	06/27/22 22:11	CJP	EPA 300.0 REV 2.1
Sulfate	15	mg/L		06/28/22 14:56	5	5.0	06/28/22 14:56	CJP	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	26.9	Feet		06/15/22 13:01	1		06/15/22 13:01	FIELD	Field
Dissolved oxygen, Field	0.20	mg/L		06/15/22 13:01	1		06/15/22 13:01	FIELD	Field
Oxidation Reduction Potential	-161	mV		06/15/22 13:01	1	-500	06/15/22 13:01	FIELD	Field
pH, Field Measured	7.64	pH Units		06/15/22 13:01	1		06/15/22 13:01	FIELD	Field
Specific Conductance, Field Measured	1511	umhos/cm		06/15/22 13:01	1		06/15/22 13:01	FIELD	Field
Temperature, Field Measured	18.0	°C		06/15/22 13:01	1		06/15/22 13:01	FIELD	Field
Turbidity, Field Measured	292	NTU		06/15/22 13:01	1	0.00	06/15/22 13:01	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	580	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Solids - total dissolved solids (TDS)	800	mg/L		06/20/22 13:04	1	26	06/20/22 15:19	CGL	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/27/22 08:41	5	3.0	06/28/22 11:52	JMW	EPA 6020A
Arsenic	27	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:52	JMW	EPA 6020A
Barium	470	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:52	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:52	JMW	EPA 6020A
Boron	120	ug/L		06/27/22 08:41	5	10	06/28/22 11:52	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:52	JMW	EPA 6020A
Calcium	82	mg/L		06/27/22 08:41	5	0.20	06/28/22 11:52	JMW	EPA 6020A
Chromium	6.5	ug/L		06/27/22 08:41	5	4.0	06/28/22 11:52	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/27/22 08:41	5	2.0	06/28/22 11:52	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:52	JMW	EPA 6020A
Magnesium	41	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:52	JMW	EPA 6020A
Mercury	6.1	ug/L		06/27/22 08:41	5	0.20	06/28/22 11:52	JMW	EPA 6020A
Molybdenum	4.8	ug/L		06/27/22 08:41	5	1.0	06/30/22 10:16	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FF03208-09
Name: APW09
Alias: NEW_257_501

Sampled: 06/15/22 13:01
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Potassium	1.8	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:52	JMW	EPA 6020A
Selenium	42	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:52	JMW	EPA 6020A
Sodium	180	mg/L		06/27/22 08:41	5	0.10	06/30/22 10:16	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:52	JMW	EPA 6020A
Lithium	< 20	ug/L		06/27/22 08:41	1	20	06/28/22 11:21	TJJ	EPA 6010B

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ANALYTICAL RESULTS

Sample: FF03208-10
Name: APW10
Alias: NEW_257_501

Sampled: 06/15/22 13:03
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	44	mg/L		06/27/22 23:42	10	10	06/27/22 23:42	CJP	EPA 300.0 REV 2.1
Sulfate	400	mg/L		06/28/22 00:01	100	100	06/28/22 00:01	CJP	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	17.94	Feet		06/15/22 13:03	1		06/15/22 13:03	FIELD	Field
Dissolved oxygen, Field	1.1	mg/L		06/15/22 13:03	1		06/15/22 13:03	FIELD	Field
Oxidation Reduction Potential	98.3	mV		06/15/22 13:03	1	-500	06/15/22 13:03	FIELD	Field
pH, Field Measured	7.14	pH Units		06/15/22 13:03	1		06/15/22 13:03	FIELD	Field
Specific Conductance, Field Measured	1512	umhos/cm		06/15/22 13:03	1		06/15/22 13:03	FIELD	Field
Temperature, Field Measured	21.2	°C		06/15/22 13:03	1		06/15/22 13:03	FIELD	Field
Turbidity, Field Measured	1.44	NTU		06/15/22 13:03	1	0.00	06/15/22 13:03	FIELD	Field
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	390	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/24/22 08:56	1	10	06/24/22 08:56	CWW/KAM	SM 2320B 1997
Fluoride	0.319	mg/L		06/29/22 11:06	1	0.250	06/29/22 11:06	TTH	SM 4500F C 1997
Solids - total dissolved solids (TDS)	1100	mg/L		06/20/22 13:04	1	26	06/20/22 15:19	CGL	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/27/22 08:41	5	3.0	06/28/22 11:56	JMW	EPA 6020A
Arsenic	8.8	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:56	JMW	EPA 6020A
Barium	26	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:56	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:56	JMW	EPA 6020A
Boron	90	ug/L		06/27/22 08:41	5	10	06/28/22 11:56	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:56	JMW	EPA 6020A
Calcium	140	mg/L		06/27/22 08:41	5	0.20	06/28/22 11:56	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/27/22 08:41	5	4.0	06/28/22 11:56	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/27/22 08:41	5	2.0	06/28/22 11:56	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:56	JMW	EPA 6020A
Magnesium	70	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:56	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/27/22 08:41	5	0.20	06/28/22 11:56	JMW	EPA 6020A
Molybdenum	7.1	ug/L		06/27/22 08:41	5	1.0	06/30/22 10:20	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FF03208-10
Name: APW10
Alias: NEW_257_501

Sampled: 06/15/22 13:03
Received: 06/16/22 09:40
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Potassium	1.5	mg/L		06/27/22 08:41	5	0.10	06/28/22 11:56	JMW	EPA 6020A
Selenium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:56	JMW	EPA 6020A
Sodium	110	mg/L		06/27/22 08:41	5	0.10	06/30/22 10:20	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/27/22 08:41	5	1.0	06/28/22 11:56	JMW	EPA 6020A
Lithium	20	ug/L		06/27/22 08:41	1	20	06/28/22 11:23	TJJ	EPA 6010B

Sample: FF03208-16
Name: XSG01
Matrix: Ground Water - Grab

Sampled: 06/15/22 12:17
Received: 06/16/22 09:40
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Field - PIA									
Depth, From Measuring Point	53.51	Feet		06/15/22 12:17	1		06/15/22 12:17	FIELD	Field

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B235724 - No Prep - SM 2540C									
Blank (B235724-BLK1)				Prepared & Analyzed: 06/17/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B235724-BS1)				Prepared & Analyzed: 06/17/22					
Solids - total dissolved solids (TDS)	987	mg/L		1000		99	84.9-109		
Batch B235808 - No Prep - SM 2540C									
Blank (B235808-BLK1)				Prepared & Analyzed: 06/20/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B235808-BS1)				Prepared & Analyzed: 06/20/22					
Solids - total dissolved solids (TDS)	1030	mg/L		1000		103	84.9-109		
Batch B235957 - No Prep - SM 2540C									
Blank (B235957-BLK1)				Prepared & Analyzed: 06/21/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B235957-BS1)				Prepared & Analyzed: 06/21/22					
Solids - total dissolved solids (TDS)	1000	mg/L		1000		100	84.9-109		
Batch B236356 - No Prep - SM 2320B 1997									
Blank (B236356-BLK1)				Prepared & Analyzed: 06/24/22					
Alkalinity - carbonate as CaCO3	< 2.0	mg/L							
Batch B236358 - No Prep - SM 2320B 1997									
Blank (B236358-BLK1)				Prepared & Analyzed: 06/24/22					
Alkalinity - bicarbonate as CaCO3	2.50	mg/L							
Batch B236361 - SW 3015 - EPA 6020A									
Blank (B236361-BLK1)				Prepared: 06/27/22 Analyzed: 06/28/22					
Antimony	< 3.0	ug/L							
Arsenic	< 1.0	ug/L							
Barium	< 1.0	ug/L							
Beryllium	< 1.0	ug/L							
Boron	< 10	ug/L							
Cadmium	< 1.0	ug/L							
Calcium	< 0.20	mg/L							
Chromium	< 4.0	ug/L							
Cobalt	< 2.0	ug/L							
Lead	2.16	ug/L	B						
Magnesium	< 0.10	mg/L							
Mercury	< 0.20	ug/L							
Molybdenum	< 1.0	ug/L							
Potassium	< 0.10	mg/L							
Selenium	< 1.0	ug/L							
Sodium	0.120	mg/L	B2						

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B236361 - SW 3015 - EPA 6020A									
Blank (B236361-BLK1)				Prepared: 06/27/22 Analyzed: 06/28/22					
Thallium	< 1.0	ug/L							
Lithium	< 20	ug/L							
LCS (B236361-BS1)				Prepared: 06/27/22 Analyzed: 06/28/22					
Antimony	547	ug/L		555.6		98	80-120		
Arsenic	529	ug/L		555.6		95	80-120		
Barium	545	ug/L		555.6		98	80-120		
Beryllium	519	ug/L		555.6		93	80-120		
Boron	558	ug/L		555.6		100	80-120		
Cadmium	523	ug/L		555.6		94	80-120		
Calcium	6.38	mg/L		5.556		115	80-120		
Chromium	556	ug/L		555.6		100	80-120		
Cobalt	545	ug/L		555.6		98	80-120		
Lead	526	ug/L		555.6		95	80-120		
Magnesium	6.44	mg/L		5.556		116	80-120		
Mercury	52.0	ug/L		55.56		94	80-120		
Molybdenum	535	ug/L		555.6		96	80-120		
Potassium	6.10	mg/L		5.556		110	80-120		
Selenium	535	ug/L		555.6		96	80-120		
Sodium	5.78	mg/L		5.556		104	80-120		
Thallium	524	ug/L		555.6		94	80-120		
Lithium	555	ug/L		555.6		100	80-120		
Batch B236367 - No Prep - SM 2320B 1997									
Blank (B236367-BLK1)				Prepared & Analyzed: 06/24/22					
Alkalinity - carbonate as CaCO3	< 2.0	mg/L							
Batch B236370 - No Prep - SM 2320B 1997									
Blank (B236370-BLK1)				Prepared & Analyzed: 06/24/22					
Alkalinity - bicarbonate as CaCO3	< 2.0	mg/L							
Batch B236495 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B236495-CCB1)				Prepared & Analyzed: 06/27/22					
Fluoride	0.00	mg/L							
Sulfate	0.0557	mg/L							
Chloride	0.171	mg/L							
Calibration Check (B236495-CCV1)				Prepared & Analyzed: 06/27/22					
Chloride	4.77	mg/L		5.000		95	90-110		
Fluoride	5.00	mg/L		5.000		100	90-110		
Sulfate	4.91	mg/L		5.000		98	90-110		
Matrix Spike (B236495-MS1)	**Sample: FF03208-05**			Prepared & Analyzed: 06/27/22					
Sulfate	2.18	mg/L		1.500	0.852	89	80-120		
Chloride	1.0E9	mg/L	Q4	1.500	45	NR	80-120		

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B236495 - IC No Prep - EPA 300.0 REV 2.1									
Matrix Spike (B236495-MS1)	**Sample: FF03208-05**			Prepared & Analyzed: 06/27/22					
Fluoride	1.55	mg/L		1.500	ND	103	80-120		
Matrix Spike (B236495-MS2)	**Sample: FF03208-06**			Prepared & Analyzed: 06/27/22					
Fluoride	1.71	mg/L		1.500	0.296	94	80-120		
Sulfate	1.00E9	mg/L	Q4	1.500	11.1	NR	80-120		
Chloride	1.0E9	mg/L	Q4	1.500	21	NR	80-120		
Matrix Spike Dup (B236495-MSD1)	**Sample: FF03208-05**			Prepared & Analyzed: 06/27/22					
Fluoride	1.57	mg/L		1.500	ND	105	80-120	1	20
Chloride	1.0E9	mg/L	Q4	1.500	45	NR	80-120	0	20
Sulfate	2.21	mg/L		1.500	0.852	91	80-120	1	20
Matrix Spike Dup (B236495-MSD2)	**Sample: FF03208-06**			Prepared & Analyzed: 06/27/22					
Sulfate	1.00E9	mg/L	Q4	1.500	11.1	NR	80-120	0	20
Chloride	1.0E9	mg/L	Q4	1.500	21	NR	80-120	0	20
Fluoride	1.73	mg/L		1.500	0.296	96	80-120	1	20
Batch B236609 - No Prep - SM 4500F C 1997									
Calibration Blank (B236609-CCB1)				Prepared & Analyzed: 06/29/22					
Fluoride	0.0120	mg/L							
Calibration Blank (B236609-CCB2)				Prepared & Analyzed: 06/29/22					
Fluoride	0.0170	mg/L							
Calibration Check (B236609-CCV1)				Prepared & Analyzed: 06/29/22					
Fluoride	0.668	mg/L		0.7000		95	90-110		
Calibration Check (B236609-CCV2)				Prepared & Analyzed: 06/29/22					
Fluoride	0.710	mg/L		0.7000		101	90-110		
Matrix Spike (B236609-MS1)	**Sample: FF03208-10**			Prepared & Analyzed: 06/29/22					
Fluoride	1.35	mg/L		1.000	0.319	103	80-120		
Matrix Spike Dup (B236609-MSD1)	**Sample: FF03208-10**			Prepared & Analyzed: 06/29/22					
Fluoride	1.41	mg/L		1.000	0.319	109	80-120	4	20
Batch B236644 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B236644-CCB1)				Prepared & Analyzed: 06/28/22					
Chloride	0.00	mg/L							
Sulfate	0.00	mg/L							
Calibration Check (B236644-CCV1)				Prepared & Analyzed: 06/28/22					
Chloride	4.90	mg/L		5.000		98	90-110		
Sulfate	5.02	mg/L		5.000		100	90-110		
Batch B236948 - SW 3015 - EPA 6020A									
Blank (B236948-BLK1)				Prepared: 07/05/22 Analyzed: 07/06/22					
Lead	< 1.0	ug/L							
LCS (B236948-BS1)				Prepared: 07/05/22 Analyzed: 07/06/22					
Lead	561	ug/L		555.6		101	80-120		

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NOTES

Specifications regarding method revisions, method modifications, and calculations used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Memos

Revised Report - reported resamples separately from routine quarterly results

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050
TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615
TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)
Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)
Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807
USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050
Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

B	Present in the method blank at 2.16 ug/L.
B2	Contamination does not impact data since sample result is greater than ten times the contamination level found in the blank.
Q4	The matrix spike recovery result is unusable since the analyte concentration in the sample is greater than four times the spike level. The associated blank spike was acceptable.

Gail J Schindler

Certified by: Gail Schindler, Project Manager

ANALYTICAL REPORT

August 24, 2022

Pace IR - Peoria, IL

Sample Delivery Group:	L1508141
Samples Received:	06/23/2022
Project Number:	FF03288
Description:	NRT Newton CCR Ash Pond
Site:	005
Report To:	Gail Schindler 2231 W. Altorfer Drive Peoria, IL 61615

Entire Report Reviewed By:

Donna Eidson
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

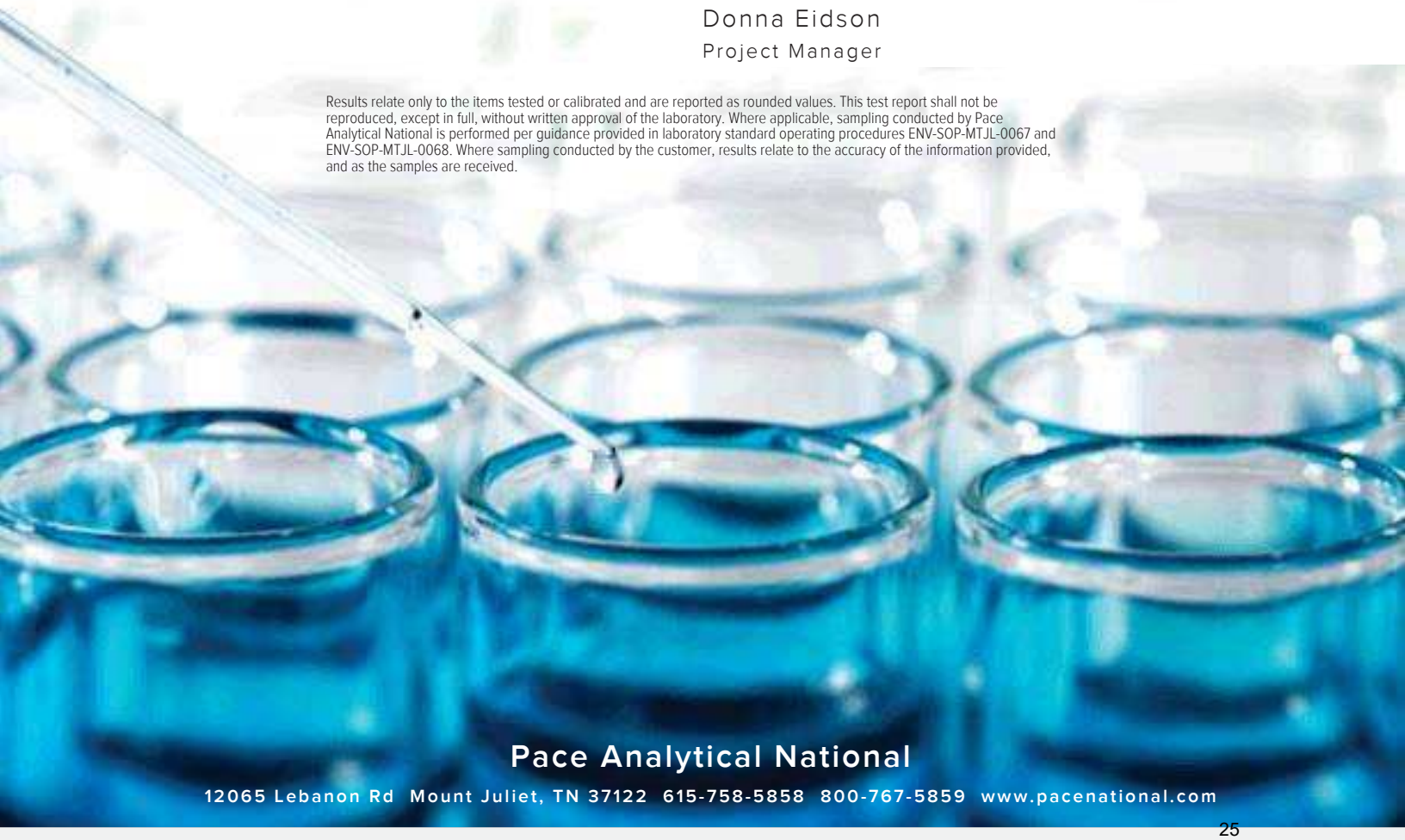

TABLE OF CONTENTS

APW05 L1508141-01 Non-Potable Water

			Collected by	Collected date/time	Received date/time	
				06/15/22 12:00	06/23/22 10:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1894908	1	07/14/22 10:51	07/20/22 14:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1896657	1	07/19/22 14:00	07/20/22 19:10	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1896657	1	07/19/22 14:00	07/20/22 19:10	RGT	Mt. Juliet, TN

APW06 L1508141-02 Non-Potable Water

			Collected by	Collected date/time	Received date/time	
				06/14/22 15:34	06/23/22 10:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1894908	1	07/14/22 10:51	07/20/22 14:42	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1896657	1	07/19/22 14:00	07/21/22 18:38	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1896657	1	07/19/22 14:00	07/21/22 18:38	RGT	Mt. Juliet, TN

APW07 L1508141-03 Non-Potable Water

			Collected by	Collected date/time	Received date/time	
				06/14/22 15:15	06/23/22 10:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1893600	1	07/13/22 14:06	07/21/22 16:12	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1896657	1	07/19/22 14:00	07/21/22 18:38	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1896657	1	07/19/22 14:00	07/21/22 18:38	RGT	Mt. Juliet, TN

APW08 L1508141-04 Non-Potable Water

			Collected by	Collected date/time	Received date/time	
				06/14/22 16:07	06/23/22 10:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1893600	1	07/13/22 14:06	07/21/22 16:12	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1896657	1	07/19/22 14:00	07/21/22 18:38	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1896657	1	07/19/22 14:00	07/21/22 18:38	RGT	Mt. Juliet, TN

APW09 L1508141-05 Non-Potable Water

			Collected by	Collected date/time	Received date/time	
				06/15/22 13:01	06/23/22 10:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1893600	1	07/13/22 14:06	07/21/22 16:12	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1907324	1	08/18/22 09:07	08/19/22 16:24	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1907324	1	08/18/22 09:07	08/19/22 16:24	RGT	Mt. Juliet, TN

APW10 L1508141-06 Non-Potable Water

			Collected by	Collected date/time	Received date/time	
				06/15/22 13:03	06/23/22 10:00	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1893600	1	07/13/22 14:06	07/21/22 16:12	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1896657	1	07/19/22 14:00	07/21/22 16:12	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1896657	1	07/19/22 14:00	07/21/22 10:24	RGT	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Donna Eidson
Project Manager

Project Narrative

Due to a lab error, all volume was used for Ra-228. Additional volume was requested and received 8/5 so Ra-226 could be completed.

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.288	J	0.231	0.415	07/20/2022 14:42	WG1894908
(T) Barium	*101*			*62.0-143*	*07/20/2022 14:42*	WG1894908
(T) Yttrium	*108*			*79.0-136*	*07/20/2022 14:42*	WG1894908

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.634		0.335	0.482	07/20/2022 19:10	WG1896657

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.346		0.242	0.245	07/20/2022 19:10	WG1896657
(T) Barium-133	*107*			*30.0-143*	*07/20/2022 19:10*	WG1896657

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.231	U	0.226	0.422	07/20/2022 14:42	WG1894908
(T) Barium	*101*			*62.0-143*	*07/20/2022 14:42*	WG1894908
(T) Yttrium	*106*			*79.0-136*	*07/20/2022 14:42*	WG1894908

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.263	J	0.309	0.483	07/21/2022 18:38	WG1896657

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.263		0.211	0.235	07/21/2022 18:38	WG1896657
(T) Barium-133	*106*			*30.0-143*	*07/21/2022 18:38*	WG1896657

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.595		0.231	0.415	07/21/2022 16:12	WG1893600
(T) Barium	*95.1*			*62.0-143*	*07/21/2022 16:12*	WG1893600
(T) Yttrium	*121*			*79.0-136*	*07/21/2022 16:12*	WG1893600

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.24		0.362	0.465	07/21/2022 18:38	WG1896657

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.647		0.279	0.209	07/21/2022 18:38	WG1896657
(T) Barium-133	*102*			*30.0-143*	*07/21/2022 18:38*	WG1896657

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.674		0.238	0.426	07/21/2022 16:12	WG1893600
(T) Barium	*97.6*			*62.0-143*	*07/21/2022 16:12*	WG1893600
(T) Yttrium	*118*			*79.0-136*	*07/21/2022 16:12*	WG1893600

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.06		0.319	0.448	07/21/2022 18:38	WG1896657

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.382		0.213	0.138	07/21/2022 18:38	WG1896657
(T) Barium-133	*106*			*30.0-143*	*07/21/2022 18:38*	WG1896657

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.577		0.233	0.420	07/21/2022 16:12	WG1893600
(T) Barium	*100*			*62.0-143*	*07/21/2022 16:12*	WG1893600
(T) Yttrium	*116*			*79.0-136*	*07/21/2022 16:12*	WG1893600

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.01		0.330	0.444	08/19/2022 16:24	WG1907324

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.435		0.233	0.145	08/19/2022 16:24	WG1907324
(T) Barium-133	*96.2*			*30.0-143*	*08/19/2022 16:24*	WG1907324

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.0377	U	0.258	0.489	07/21/2022 16:12	WG1893600
(T) Barium	*91.4*			*62.0-143*	*07/21/2022 16:12*	WG1893600
(T) Yttrium	*120*			*79.0-136*	*07/21/2022 16:12*	WG1893600

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.264	J	0.328	0.537	07/21/2022 16:12	WG1896657

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.264		0.203	0.223	07/21/2022 10:24	WG1896657
(T) Barium-133	*104*			*30.0-143*	*07/21/2022 10:24*	WG1896657

Method Blank (MB)

(MB) R3818286-1 07/21/22 16:12

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	-0.0134	U	0.116	0.223
(T) Barium	*99.7*		*99.7*	
(T) Yttrium	*102*		*102*	

L1507649-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1507649-06 07/21/22 16:12 • (DUP) R3818286-5 07/21/22 16:12

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.161	0.222	0.415	0.701	0.289	0.415	1	125	1.48		20	3
(T) Barium	*96.7*			*96.2*	*96.2*							
(T) Yttrium	*115*			*114*	*114*							

Laboratory Control Sample (LCS)

(LCS) R3818286-2 07/21/22 16:12

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.16	83.3	80.0-120	
(T) Barium			*104*		
(T) Yttrium			*112*		

L1507101-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507101-01 07/21/22 16:12 • (MS) R3818286-3 07/21/22 16:12 • (MSD) R3818286-4 07/21/22 16:12

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.800	11.3	10.1	105	92.9	1	70.0-130			11.1		20
(T) Barium		*89.1*			*99.7*	*93.1*							
(T) Yttrium		*117*			*112*	*117*							

Method Blank (MB)

(MB) R3817573-1 07/20/22 14:42

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.0621	U	0.121	0.222
(T) Barium	*107*		*107*	
(T) Yttrium	*104*		*104*	

L1513844-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1513844-02 07/20/22 14:42 • (DUP) R3817573-5 07/20/22 14:42

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	1.76	0.280	0.455	2.07	0.298	0.455	1	16.2	0.761		20	3
(T) Barium	*93.9*			*106*	*106*							
(T) Yttrium	*104*			*112*	*112*							

Laboratory Control Sample (LCS)

(LCS) R3817573-2 07/20/22 14:42

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.27	85.4	80.0-120	
(T) Barium			*109*		
(T) Yttrium			*113*		

L1513844-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1513844-01 07/20/22 14:42 • (MS) R3817573-3 07/20/22 14:42 • (MSD) R3817573-4 07/20/22 14:42

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	2.39	10.7	10.0	83.3	76.2	1	70.0-130			6.85		20
(T) Barium		*99.1*			*100*	*106*							
(T) Yttrium		*108*			*109*	*111*							

Method Blank (MB)

(MB) R3818310-1 07/20/22 19:10

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-226	-0.00675	U	0.0132	0.0337
(T) Barium-133	*102*		*102*	

L1508141-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1508141-06 07/21/22 10:24 • (DUP) R3818310-5 07/20/22 19:10

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.264	0.203	0.223	0.181	0.183	0.223	1	37.5	0.304	J	20	3
(T) Barium-133	*104*			*102*	*102*							

Laboratory Control Sample (LCS)

(LCS) R3818310-2 07/20/22 19:10

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.02	4.85	96.6	80.0-120	
(T) Barium-133			*105*		

L1508141-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508141-01 07/20/22 19:10 • (MS) R3818310-3 07/20/22 19:10 • (MSD) R3818310-4 07/20/22 19:10

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.346	18.2	17.0	89.1	83.3	1	75.0-125			6.60		20
(T) Barium-133		*107*			*103*	*104*							

Method Blank (MB)

(MB) R3829510-1 08/19/22 16:24

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-226	0.0191	U	0.0332	0.0540
(T) Barium-133	*94.7*		*94.7*	

L1520189-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1520189-05 08/19/22 16:24 • (DUP) R3829510-5 08/19/22 16:24

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.135	0.217	0.322	0.0121	0.0748	0.322	1	167	0.536	U	20	3
(T) Barium-133	*99.4*			*98.4*	*98.4*							

Laboratory Control Sample (LCS)

(LCS) R3829510-2 08/19/22 16:24

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.02	5.26	105	80.0-120	
(T) Barium-133			*97.1*		

L1508141-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508141-05 08/19/22 16:24 • (MS) R3829510-3 08/19/22 16:24 • (MSD) R3829510-4 08/19/22 16:24

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.435	19.4	16.7	95.0	81.3	1	75.0-125			15.2		20
(T) Barium-133		*96.2*			*92.4*	*91.7*							

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

A008

Internal Transfer Chain of Custody

Pace Analytical
www.pacelabs.com

State of Origin: IL
Cert. Needed: [X] YES [ ] NO

Workorder: FF03288 **Workorder Name:** NRT NEWTON CCR ASH POND **Owner Received Date:** 6/16/2022 **Results Requested By:** 7/8/2022

Report To:	Subcontract To:
Gail Schindler Pace Analytical - IL/MO 2231 W. Altorfer Drive Peoria, IL 61615 800-752-6651	Pace Analytical Services, LLC 12065 Lebanon Mt. Juliet, TN 37122 (615)758-5858

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Requested Analysis: Radium 226/228	LAB USE ONLY
1	APW05	Grab	6/15/2022 12:00	FF03208-05	GW		X	-01
2	APW06	Grab	6/14/2022 15:34	FF03208-06	GW		X	-02
3	APW07	Grab	6/14/2022 15:15	FF03208-07	GW		X	-03
4	APW08	Grab	6/14/2022 16:07	FF03208-08	GW		X	-04
5	APW09	Grab	6/15/2022 13:01	FF03208-09	GW		X	-05
6	APW10	Grab	6/15/2022 13:03	FF03208-10	GW		X	-06
7								
8								
9								
10								

L1508141

Transfers	Released By	Date/Time	Reveived By	Date/Time	Comments
1	E Shaw	6/20/22 1152			Needs reported as 226, 228 and also combined 226/228 Include QC summary
2				6/23/22 1000	
3					

Cooler Temperature on Receipt _____ °C **Custody Seal** Y or N **Received on Ice** Y or N **Sample Intact** Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

MMAT
28,6+0=28,6

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

A061

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

State of Origin: IL
Cert. Needed: [X] YES [ ] NO

Workorder: FF03288 **Workorder Name:** NRT NEWTON CCR ASH POND **Owner Received Date:** 6/16/2022 **Results Requested By:** 7/8/2022

Report To:	Subcontract To:
Gail Schindler Pace Analytical - IL/MO 2231 W. Altorfer Drive Peoria, IL 61615 800-752-6651	Pace Analytical Services, LLC 12065 Lebanon Mt. Juliet, TN 37122 (615)758-5858

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Requested Analysis: Radium 226/228	LAB USE ONLY
1	APW05	Grab	6/15/2022 12:00	FF03208-05	GW		X	L1508141 ADDITIONAL SAMPLE for 226-01
2	APW06	Grab	6/14/2022 15:34	FF03208-06	GW		X	
3	APW07	Grab	6/14/2022 15:15	FF03208-07	GW		X	
4	APW08	Grab	6/14/2022 16:07	FF03208-08	GW		X	
5	APW09	Grab	6/15/2022 13:01	FF03208-09	GW		X	
6	APW10	Grab	6/15/2022 13:03	FF03208-10	GW		X	
7								
8								
9								
10								

Transfers	Released By	Date/Time	Reveived By	Date/Time	Comments
1			[signature]	8/5/22 1000	Needs reported as 226, 228 and also combined 226/228 Include QC summary
2					
3					

Cooler Temperature on Receipt Amb °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Sample Intact** Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

A138

Internal Transfer Chain of Custody

State of Origin: IL
Cert. Needed: [X] YES [ ] NO

Pace Analytical
www.pacelabs.com

Workorder: FF03288 **Workorder Name:** NRT NEWTON CCR ASH POND **Owner Received Date:** 6/16/2022 **Results Requested By:** 7/8/2022

Report To:	Subcontract To:
Gail Schindler Pace Analytical - IL/MO 2231 W. Altorfer Drive Peoria, IL 61615 800-752-6651	Pace Analytical Services, LLC 12065 Lebanon Mt. Juliet, TN 37122 (615)758-5858

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Requested Analysis: Radium 226/228	LAB USE ONLY
1	~~APW05~~	Grab	~~6/15/2022 12:00~~	~~FF03208-05~~	GW		X	
2	~~APW06~~	Grab	~~6/14/2022 15:34~~	~~FF03208-06~~	GW		X	
3	~~APW07~~	Grab	~~6/14/2022 15:15~~	~~FF03208-07~~	GW		X	
4	~~APW08~~	Grab	~~6/14/2022 16:07~~	~~FF03208-08~~	GW		X	
5	APW09	Grab	6/15/2022 13:01	FF03208-09	GW		X	-01
6	~~APW10~~	Grab	~~6/15/2022 13:03~~	~~FF03208-10~~	GW		X	
7								
8								
9								
10								

L508141

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	E Schaw	8/15/22 1104	[illegible]	8/16/22 1000	Needs reported as 226, 228 and also combined 226/228 Include QC summary
2					
3					

Cooler Temperature on Receipt _____ °C	Custody Seal Y or N	Received on Ice Y or N	Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

FMT-ALL-C-002rev.00 24March2009

Amb

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

PACE ANALYTICAL SERVICES
WWW.PACELABS.COM

REGULATORY PROGRAM (CIRCLE):	NPDES
MORBCA	RCRA
CCDD	TACO: RES OR IND/COMM

Received After Hours

CHAIN OF CUSTODY RECORD

STATE WHERE SAMPLE COLLECTED

(1) CLIENT: RAMBOLL - MILWAUKEE
ADDRESS: 234 W FLORIDA ST, 5TH FLOOR
CITY STATE ZIP: MILWAUKEE WI 53204
CONTACT PERSON: ERIC BAUER

PROJECT NUMBER:
PROJECT LOCATION: NEWTON
PURCHASE ORDER #:
PHONE NUMBER:
E-MAIL:
DATE SHIPPED:
SAMPLER (PLEASE PRINT): Joe Reed
SAMPLER'S SIGNATURE: Joseph R Reed

MATRIX TYPES: WW- WASTEWATER; DW- DRINKING WATER; GW- GROUND WATER; WWSL- SLUDGE; NAS- NON AQUEOUS SOLID; LCHT-LEACHATE; OIL-OIL; SO-SOIL; SOL-SOLID

(3) ANALYSIS REQUESTED

(4) (FOR LAB USE ONLY)
LOGIN: FF03108-10
LOGGED BY: DW
RAMBOLL - MILWAUKEE
NRT NEWTON CCR PRIMARY ASH POND
GAIL SCHINDLER:

(2) SAMPLE DESCRIPTION (UNIQUE DESCRIPTION AS IT WILL APPEAR ON THE ANALYTICAL REPORT)	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	BOTTLE COUNT	PRES CODE CLIENT PROVIDED	ALK HCO3, ALK CO3,	CL, SO4, CA, MG, NA, K	F, AS, BA, BE, B, CD,	CR, CO, PB, TL, MO, SB	LI, SE, HG	RAD 226/228		REMARKS
XPW01	6/14/22	1513	X		GW	2		X	X						
XPW02	6/14/22	1602	X			2		X	X						
XPW03	6/15/22	1040	X			2		X	X						
XPW04	6/15/22	1017	X			2		X	X						
APW05	6/15/22	1200	X			3		X	X	X	X	X	X		
APW06	6/14/22	1534	X			3		X	X	X	X	X	X		
APW07	6/14/22 → 6/15/22	1515	X			3		X	X	X	X	X	X		
APW08	6/14/22	1607	X			3		X	X	X	X	X	X		
APW09	JR 6/14/22 → 6/15/22	1515 → 1381	X			3		X	X	X	X	X	X		
APW10	6/15/22	1303	X			3		X	X	X	X	X	X		

CHEMICAL PRESERVATION CODES: 1 – HCL | 2 – H2SO4 | 3 – HNO3 | 4 – NAOH | 5 – NA2S2O3 | 6 – UNPRESERVED | 7 – OTHER

(5) TURNAROUND TIME REQUESTED (PLEASE CIRCLE) NORMAL RUSH
(RUSH TAT IS SUBJECT TO PACE LABS APPROVAL AND SURCHARGE)
RUSH RESULTS VIA (PLEASE CIRCLE) EMAIL PHONE
EMAIL IF DIFFERENT FROM ABOVE:
PHONE # IF DIFFERENT FROM ABOVE:
DATE RESULTS NEEDED:

(6) *I understand that by initialing this box I give the lab permission to proceed with analysis, even though it may not meet all sample conformance requirements as defined in the receiving facility's Sample Acceptance Policy and the data will be qualified. Qualified data may NOT be acceptable to report to all regulatory authorities.*
PROCEED WITH ANALYSIS AND QUALIFY RESULTS: (INITIALS) _____

(7)

RELINQUISHED BY: (SIGNATURE) Joseph R Reed	DATE 6/15/22 TIME 2000	RECEIVED BY: (SIGNATURE)	DATE	TIME
RELINQUISHED BY: (SIGNATURE)	DATE	RECEIVED BY: (SIGNATURE)	DATE	TIME
RELINQUISHED BY: (SIGNATURE)	DATE	RECEIVED BY: (SIGNATURE)	DATE 6/16/22	TIME 940

(8) COMMENTS: (FOR LAB USE ONLY)

SAMPLE TEMPERATURE UPON RECEIPT: 3.9 °C
CHILL PROCESS STARTED PRIOR TO RECEIPT: (Y) OR N
SAMPLE(S) RECEIVED ON ICE: (Y) OR N
SAMPLE ACCEPTANCE NONCONFORMANT REPORT IS NEEDED: Y OR (N)
DATE AND TIME TAKEN FROM SAMPLE BOTTLE: _____

SITE **NEWTON**

WELL **XPW01**

Date: 6/14/22 Start Time: 1420 Finish/Sample Time: 1513

Well Depth (Bottom) From MP: _____ ft Purge Rate: 100 mL/min

Depth to Water From MP: 11.49 ft Total Purge Volume: 1.6 (L) Gal

Reading	Time	DTW	Purge	pH	Spec Con	Temp	Turbidity	DO	ORP
(Units)		feet	Volume	s.u.	umhos/cm	deg C	NTU	mg/L	mV
1	14:54	11.50	1200	12.45	16485	18.91	13.63	0.00	-399.8
2	14:56	11.50	1400	12.47	16294	18.95	10.51	0.00	-386.5
3	14:58	11.50	1600	12.46	16194	18.86	9.91	0.00	-374.4
4									
5									

Sampled with: dedicated bladder pump

Odor:	☐ None	☑ Slight	☐ Mod.	☐ Strong
Color	☐ None	☐ Slight	☐ Mod.	☑ Strong
Turb	☐ None	☐ Slight	☐ Mod	☑ Strong

Weather:/Environment _____

Remarks: _____

BOTTLE INFORMATION:

Filtered	
Qty	Bottles
	Plastic (2.5L)
1	Metals (P,250mL, HNO3)
1	General (P,~~500mL~~) 1000mL

Comments _____

Sampler's Signature: [signature] aidan Jones

SITE **NEWTON**

WELL **XPW02**

Date: 6/14/22 Start Time: 1519 Finish/Sample Time: 16:02

Well Depth (Bottom) From MP: _____ ft Purge Rate: 100 mL/min

Depth to Water From MP: 7.88 ft Total Purge Volume: 1.4 ◷/ Gal

Reading	Time	DTW	Purge	pH	Spec Con	Temp	Turbidity	DO	ORP
(Units)		feet	Volume	s.u.	umhos/cm	deg C	NTU	mg/L	mV
1	15:37	7.88	1000	10.20	528.13	20.65	6.52	0.29	-255.8
2	15:39	7.88	1200	10.13	523.63	20.55	6.13	0.24	-259.3
3	15:41	7.88	1400	10.10	523.05	20.56	6.03	0.22	-262.0
4									
5									

Sampled with: dedicated ~~bailer~~ bladder pump

Odor:	☐ None	☐ Slight	☑ Mod.	☐ Strong
Color	☑ None	☐ Slight	☐ Mod.	☐ Strong
Turb	☑ None	☐ Slight	☐ Mod	☐ Strong

Weather:/Environment _____

Remarks: _____

BOTTLE INFORMATION:

Filtered	
Qty	Bottles
	Plastic (2.5L)
1	Metals (P,250mL, HNO3)
1	General (P,~~500mL~~) 1000mL

Comments _____

Sampler's Signature: Aidan Dames

SITE **NEWTON**

WELL **XPW03**

Date: 6/15/22 Start Time: 1025 Finish/Sample Time: 1040

Well Depth (Bottom) From MP: Pump ft Purge Rate: 100 mL/min

Depth to Water From MP: 10.72 ft Total Purge Volume: 1.6 (L) Gal

Reading	Time	DTW	Purge	pH	Spec Con	Temp	Turbidity	DO	ORP
(Units)		feet	Volume	s.u.	umhos/cm	deg C	NTU	mg/L	mV
1	1044	10.72	100	11.36	952.56	18.33	472.33	0.28	-265.3
2	1046	10.72	100	11.36	960.94	18.40	390.49	0.26	-263.5
3	1048	10.72	100	11.33	966.43	18.30	300.34	0.27	-264.3
4									
5									

Sampled with: AT 600

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb ☒ None ☐ Slight ☐ Mod ☐ Strong

Weather:/Environment

Remarks:

BOTTLE INFORMATION:

Filtered	
Qty	Bottles
	Plastic (2.5L)
1	Metals (P,250mL, HNO3)
1	General (P, ~~500mL~~) 1000

Comments

Sampler's Signature: Joseph R Reid

SITE **NEWTON**

WELL **XPW04**

Date: 6/15/22 Start Time: 939 Finish/Sample Time: 1017

Well Depth (Bottom) From MP: Pump ft Purge Rate: 100mL/min

Depth to Water From MP: 12.69 ft Total Purge Volume: 1.8 (L) / Gal

Reading	Time	DTW	Purge	pH	Spec Con	Temp	Turbidity	DO	ORP
(Units)		feet	Volume	s.u.	umhos/cm	deg C	NTU	mg/L	mV
1	958	12.69	100	11.65	13072.1	20.61	29.71	0.51	-304.2
2	1000	12.69	100	11.70	13100.9	19.90	23.55	0.48	-315.9
3	1002	12.69	100	11.73	13117.3	19.88	41.40	0.44	-323.4
4	1004	12.69	100	11.75	13121.4	19.89	40.11	0.40	-331.9
5									

Sampled with: AT 600

Odor: ☐ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☐ Slight ☐ Mod. ☐ Strong

Turb ☐ None ☐ Slight ☐ Mod ☐ Strong

Weather:/Environment

Remarks:

BOTTLE INFORMATION:

Filtered	
Qty	Bottles
	Plastic (2.5L)
1	Metals (P,250mL, HNO3)
1	General (P,~~500~~mL) 1000mL

Comments

Sampler's Signature: Joseph R Reed

SITE **NEWTON**

WELL **APW05**

Date: 6/15/22 Start Time: 1057 Finish/Sample Time: 1200

Well Depth (Bottom) From MP: NM ft Purge Rate: 100 ml/min

Depth to Water From MP: 14.45 ft Total Purge Volume: 1.9 (L) / Gal

Reading	Time	DTW	Purge (mL) Volume	pH	Spec Con	Temp	Turbidity	DO	ORP
(Units)		feet		s.u.	umhos/cm	deg C	NTU	mg/L	mV
1	1117	14.46	1500 mL	7.61	926.20	19.28	9.21	0.28	-134.7
2	1119	14.46	1700 mL	7.58	933.51	19.22	8.96	0.24	-137.3
3	1121	14.46	1900 mL	7.54	924.36	19.18	9.57	0.21	-138.3
4									
5									

ME 6/15/22

Sampled with: Bladder pump

Odor: ☑ None ☐ Slight ☐ Mod. ☐ Strong

Color ☑ None ☐ Slight ☐ Mod. ☐ Strong

Turb ☑ None ☐ Slight ☐ Mod ☐ Strong

Weather:/Environment 96° F sunny wind E 5-10 mph

Remarks:

BOTTLE INFORMATION:

Filtered	
Qty	Bottles
1	Plastic (2.5L)
1	Metals (P,250mL, HNO3)
1	General (P, ~~500mL~~) ME 6/15/22
	1000 mL

Final DTW 14.46 ft

Comments

Sampler's Signature:

SITE **NEWTON**

WELL **APW06**

Date: 6/14/2022 Start Time: 1425 Finish/Sample Time: 1534

Well Depth (Bottom) From MP: 75.72 ft Purge Rate: 100 mL/min

Depth to Water From MP: 19.39 ft Total Purge Volume: 1000 L / Gal (mL)

Reading	Time	DTW	Purge	pH	Spec Con	Temp	Turbidity	DO	ORP
(Units)		feet	Volume	s.u.	umhos/cm	deg C	NTU	mg/L	mV
1	1447	19.34	100	—	—	—	—	—	—
2	1452	19.50	100	7.47	928.72	23.34	384.60	1.49	-100.2
3	1454	19.50	100	7.47	934.34	23.19	1090.30	1.56	-94.1
4	1456	19.50	100	7.47	934.49	23.09	788.53	1.54	-108.5
5									

Sampled with: portable pump

Odor:	☒ None	☐ Slight	☐ Mod.	☐ Strong
Color	☐ None	☒ Slight	☐ Mod.	☐ Strong
Turb	☐ None	☐ Slight	☐ Mod	☒ Strong

Weather:/Environment

Remarks:

BOTTLE INFORMATION:

Filtered	
Qty	Bottles
1	Plastic (2.5L)
1	Metals (P,250mL, HNO3)
1	General (P,~~500mL~~) 1000 mL

Comments

Sampler's Signature: austin Brown

SITE **NEWTON**

WELL **APW07**

Date: 6/14/22 Start Time: 1422 Finish/Sample Time: 1515

Well Depth (Bottom) From MP: ~~46.48~~ ft pump

Depth to Water From MP: 46.48 ft

Purge Rate: 100 mL/min

Total Purge Volume: 1.5 (L) / Gal

Reading	Time	DTW	Purge	pH	Spec Con	Temp	Turbidity	DO	ORP
(Units)		feet	Volume	s.u.	umhos/cm	deg C	NTU	mg/L	mV
1	1439	46.50	1100	7.40	1020.7	18.68	28.24	4.27	-75.9
2	1441	46.50	1300	7.37	1031.1	18.70	26.70	3.01	-84.5
3	1443	46.50	1500	7.36	1037.3	18.68	29.84	2.29	-91.7
4									
5									

Sampled with: AT 600

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb ☒ None ☐ Slight ☐ Mod ☐ Strong

Weather:/Environment HOT

Remarks:

BOTTLE INFORMATION:

Filtered	
Qty	Bottles
1	Plastic (2.5L)
1	Metals (P,250mL, HNO3)
1	General (P,500mL)

End DTW - 46.48

Comments

Sampler's Signature: Jacob P Rad

SITE **NEWTON**

WELL **APW08**

Date: 6/14/22 Start Time: 1520 Finish/Sample Time: 1607

Well Depth (Bottom) From MP: _____ ft Purge Rate: 100 mL/min

Depth to Water From MP: 37.29 ft Total Purge Volume: 1.5 (L) Gal

Reading	Time	DTW	Purge	pH	Spec Con	Temp	Turbidity	DO	ORP
(Units)		feet	Volume	s.u.	umhos/cm	deg C	NTU	mg/L	mV
1	1530	37.30	1100	7.40	1069.4	17.41	4.68	0.75	-139.0
2	1532	37.30	1300	7.42	1075.1	17.45	4.56	0.70	-141.2
3	1534	37.30	1500	7.40	1078.9	17.47	5.09	0.68	-139.2
4									
5									

Sampled with: AT 600

Odor: ☐ None ☒ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb ☒ None ☐ Slight ☐ Mod ☐ Strong

Weather:/Environment _____

Remarks: _____

BOTTLE INFORMATION:

Filtered	
Qty	Bottles
1	Plastic (2.5L)
1	Metals (P,250mL, HNO3)
1	General (P,500mL)

End DTW 37.30

Comments _____

Sampler's Signature: Joseph R Kan

SITE **NEWTON**

WELL **APW09**

Date: 6/15/22 Start Time: 1155 Finish/Sample Time: 1301

Well Depth (Bottom) From MP: Pump ft Purge Rate: 100 mL/min

Depth to Water From MP: 26.90 ft Total Purge Volume: 1.8 (L) Gal

Reading	Time	DTW	Purge	pH	Spec Con	Temp	Turbidity	DO	ORP
(Units)		feet	Volume	s.u.	umhos/cm	deg C	NTU	mg/L	mV
1	1209	26.90	100	7.55	1540.1	18.21	303.41	0.38	-157.8
2	1211	26.90	100	7.60	1521.9	18.09	639.31	0.29	-162.3
3	1213	26.90	100	7.64	1511.1	18.25	291.91	0.20	-161.4
4									
5									

Sampled with: AT 609

Odor: ☐ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☐ Slight ☐ Mod. ☐ Strong

Turb ☐ None ☐ Slight ☐ Mod ☐ Strong

Weather:/Environment

Remarks:

BOTTLE INFORMATION:

Filtered	
Qty	Bottles
	Plastic (2.5L)
1	Metals (P,250mL, HNO3)
1	General (P, ~~500mL~~ 1000mL

Comments

Sampler's Signature:

SITE **NEWTON**

WELL **APW10**

Date: 6/15/22 Start Time: 1157 Finish/Sample Time: 1303

Well Depth (Bottom) From MP: _____ ft Purge Rate: 100 mL/min

Depth to Water From MP: 17.94 ft Total Purge Volume: 2.3 (L) Gal

Reading	Time	DTW	Purge Volume (mL)	pH	Spec Con	Temp	Turbidity	DO	ORP
(Units)		feet		s.u.	umhos/cm	deg C	NTU	mg/L	mV
1	1215	17.98	1500	7.25	1494.7	20.98	1.61	1.80	103.6
2	1217	17.98	1700	7.23	1494.3	20.98	1.69	1.60	103.1
3	1219	17.98	1900	7.18	1498.3	21.05	1.76	1.33	102.3
4	1221	17.98	2100	7.15	1502.2	21.13	1.78	1.22	101.0
5	1223	17.98	2300	7.14	1511.1	21.15	1.44	1.13	98.3

Sampled with: Bladder pump

Odor: ☑ None ☐ Slight ☐ Mod. ☐ Strong

Color ☑ None ☐ Slight ☐ Mod. ☐ Strong

Turb ☑ None ☐ Slight ☐ Mod ☐ Strong

Weather:/Environment 96°F Sunny wind E 5-10 mph

Remarks: _____

BOTTLE INFORMATION:

Filtered	
Qty	Bottles
1	Plastic (2.5L)
1	Metals (P,250mL, HNO3)
1	General (P,~~500mL~~)
	100mL MW 6/15/22

Final DTW 17.98 ft

Comments _____

Sampler's Signature: _____

SITE **NEWTON**

WELL **XSG01**

Date: 6/15/22 Start Time: 1217 Finish Time: 1217

Depth to Water From MP: 535.1 ft

DTW MEASUREMENT ONLY

Comments

Sampler's Signature: Joseph R Reed

SITE **NEWTON**

WELL **SG02**

Date: _____ Start Time: _____ Finish Time: _____

Depth to Water From MP: _____ ft

DTW MEASUREMENT ONLY

Doesn't Exist?

Comments _____

_____

Sampler's Signature: _____

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Kyle Lane	Location:	Newton
Weather:		Environment:	

Multiparameter Water Meter	Make:	In-Situ	Model:	AQUA Troll 600	Serial Number:	844000
Water Level Meter	Make:	Heron	Model:	1900	Serial Number:	19F2111015HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	P	NA	NA	MSI	L315-04	11/22/2023
pH 7.00a	6.95	s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a	9.95	s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC Zero (DI)	18.10	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1994.7	µS/cm	±5%				Geotech	1GK328	Nov-22
ORP	268.8 / 34.8	mV	±15 mV				InSitu	1GL481	Sep-22
DO (Zero pt)	0.04	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.76	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.12	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 2:00 PM

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.03	s.u.	±0.15 s.u.	P	NA	Geotech	1GF009	Jun-23
pH 7.00b	6.89	s.u.	±0.15 s.u.			Geotech	0GJ268	Oct-22
pH 10.00b	9.37	s.u.	±0.15 s.u.			Geotech	1GF458	Jun-23
SC 1000	972.45	µS/cm	±5%			Ricca	2108D48	Jul-23

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 16:10

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	P	NA	NA	MSI	L315-04	11/22/2023
pH 7.00a	6.96	s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a	9.98	s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000	991.8	µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)	0.07	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	1.21	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Kyle Lane	Date:	6/14/22

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore AP	Location:	Newton
Weather:		Environment:	Grassy / muddy

Multiparameter Water Meter	Make: AT	Model: 600	Serial Number:	762098	
Water Level Meter	Make: Heron	Model: Dipper T-2	Serial Number:	19FC220Z 131AL	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	P	NO	N/A	MSI	L315-04	11/22/2023
pH 7.00a	7.07	s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a	10.00	s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC Zero (DI)	0.67	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1941.80	µS/cm	±5%				Geotech	1GK328	Nov-22
ORP	204.3	mV	±15 mV				InSitu	1GL481	Sep-22
DO (Zero pt)	0.04	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.70	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.14	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 1413

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.05	s.u.	±0.15 s.u.	P	N/A	Geotech	1GF009	Jun-23
pH 7.00b	7.00	s.u.	±0.15 s.u.			Geotech	0GJ268	Oct-22
pH 10.00b	9.99	s.u.	±0.15 s.u.			Geotech	1GF458	Jun-23
SC 1000	968.49	µS/cm	±5%			Ricca	2108D48	Jul-23

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
pH 7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments: only one well sampled

Signature:	Austin Moore	Date:	6/14/22

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Sam Grant, Aiden Jones	Location:	Newton Power Station
Weather:		Environment:	Dusty road

Multiparameter Water Meter	Make:	In-Situ	Model:	AquaTroll 600	Serial Number: 739449
Water Level Meter	Make:	Heron	Model:	W-T	Serial Number: 19FF-220115214B

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.96	s.u.	±0.1 s.u.	P			MSI	L315-04	11/22/2023
pH 7.00a	6.97	s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a	9.97	s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC Zero (DI)	15.48	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1810.5	µS/cm	±5%	F	Y	2000.0	Geotech	1GK328	Nov-22
ORP	218.5	mV	±15 mV	P			InSitu	1GL481	Sep-22
DO (Zero pt)	0.03	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	92.21	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.65	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

Zobell 233 @ 22°C

ICV (Initial Calibration Verification) — Time: 14:10

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.11	s.u.	±0.15 s.u.	P	None	Geotech	1GF009	Jun-23
pH 7.00b	6.93	s.u.	±0.15 s.u.			Geotech	0GJ268	Oct-22
pH 10.00b	9.82	s.u.	±0.15 s.u.			Geotech	1GF458	Jun-23
SC 1000	1033.0	µS/cm	±5%			Ricca	2108D48	Jul-23

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 16:20

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.09	s.u.	±0.1 s.u.	P	N	NA	MSI	L315-04	11/22/2023
pH 7.00a	7.02	s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a	9.92	s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000	1049	µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)	0.09	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	1.80	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	[signature]	Date:	6/14/22

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Aidan Jones	Location:	Newton Power Station
Weather:	sunny, clear	Environment:	grassy

Multiparameter Water Meter	Make: AT	Model: 600	Serial Number:	762215	
Water Level Meter	Make: Heron	Model: 1900	Serial Number:	19FF2111192HB	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	P	N/A	N/A	MSI	L315-04	11/22/2023
pH 7.00a	7.04	s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a	9.92	s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC Zero (DI)	2.65	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1991.4	µS/cm	±5%				Geotech	1GK328	Nov-22
ORP	214.4	mV	±15 mV				InSitu	1GL481	Sep-22
DO (Zero pt)	0.09	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.85	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 9:00 AM			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.05	s.u.	±0.15 s.u.	P	N/A	Geotech	1GF009	Jun-23
pH 7.00b	6.98	s.u.	±0.15 s.u.	P		Geotech	0GJ268	Oct-22
pH 10.00b	9.92	s.u.	±0.15 s.u.	P		Geotech	1GF458	Jun-23
SC 1000	1016.2	µS/cm	±5%	P		Ricca	2108D48	Jul-23

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
pH 7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Aidan Jones	Date:	6-19-22

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Kyle Lorn	Location:	Newton
Weather:	96°F Sunny Wind E 5 mph	Environment:	dry, grass

Multiparameter Water Meter	Make: In-Situ	Model:	Aqua TROLL 600	Serial Number:	606127
Water Level Meter	Make:	Model:		Serial Number:	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	P	Na	Na	MSI	L315-04	11/22/2023
pH 7.00a	6.93	s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a	9.98	s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC Zero (DI)	17.88	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1983	µS/cm	±5%				Geotech	1GK328	Nov-22
ORP 215.4	31.0	mV	±15 mV				InSitu	1GL481	Sep-22
DO (Zero pt)	0.04	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.76	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.35	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 12:02			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.02	s.u.	±0.15 s.u.	P	Na	Geotech	1GF009	Jun-23
pH 7.00b	6.94	s.u.	±0.15 s.u.			Geotech	0GJ268	Oct-22
pH 10.00b	9.86	s.u.	±0.15 s.u.			Geotech	1GF458	Jun-23
SC 1000	987.00	µS/cm	±5%			Ricca	2108D48	Jul-23

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 14:50				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.04	s.u.	±0.1 s.u.	P	Na	Na	MSI	L315-04	11/22/2023
pH 7.00a	6.94	s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a	9.96	s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000	993.37	µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)	0.01	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	1.25	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 14:50				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Kyle Lorn	Date:	6-15-22

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

November 15, 2022

Terry Hanratty
Vistra - Newton
Newton Energy Center 6725 N. 500th St
Newton, IL 62448

Dear Terry Hanratty:

Please find enclosed the **revised** analytical results for the sample(s) the laboratory received. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of Pace Analytical Services, LLC.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

Pace Analytical Services appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lisa.grant@pacelabs.com.

Gail J Schindler

Gail Schindler
Project Manager
(309) 692-9688 x1716
gail.schindler@pacelabs.com

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order FH03255

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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Work Order FH03662

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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Work Order FH03663

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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Work Order FH04032

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

Pace Analytical Services, LLC
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Peoria, IL 61615
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Work Order FH04033

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

ANALYTICAL RESULTS

Sample: FH03663-01
Name: APW05
Alias: NEW_257_501

Sampled: 08/16/22 12:37
Received: 08/17/22 15:37
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	0.248 U	pCi/L			1	0.655	09/21/22 10:18		904.0 903.0

Sample: FH03663-02
Name: APW07
Alias: NEW_257_501

Sampled: 08/16/22 13:56
Received: 08/17/22 15:37
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	1.91	pCi/L			1	0.535	09/21/22 10:18		904.0 903.0

Sample: FH03663-03
Name: APW08
Alias: NEW_257_501

Sampled: 08/16/22 15:18
Received: 08/17/22 15:37
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	2.28	pCi/L			1	0.606	09/21/22 10:18		904.0 903.0

Sample: FH04033-01
Name: APW06
Alias: NEW_257_501

Sampled: 08/17/22 15:05
Received: 08/18/22 14:22
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	1.12	pCi/L			1	0.62	09/21/22 10:18		904.0 903.0

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ANALYTICAL RESULTS

Sample: FH04033-02
Name: APW09
Alias: NEW_257_501

Sampled: 08/17/22 12:13
Received: 08/18/22 14:22
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	9.42	pCi/L			1	0.868	09/21/22 10:18		904.0 903.0

Sample: FH04033-03
Name: APW10
Alias: NEW_257_501

Sampled: 08/17/22 13:45
Received: 08/18/22 14:22
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	0.289 U	pCi/L			1	0.852	09/21/22 10:18		904.0 903.0

ANALYTICAL RESULTS

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ANALYTICAL RESULTS

Sample: FH03255-01
Name: XPW01
Alias: NEW_257_501

Sampled: 08/15/22 16:48
Received: 08/16/22 15:28
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	11	mg/L		08/24/22 19:20	10	10	08/24/22 19:20	CRD	EPA 300.0 REV 2.1
Fluoride	4.64	mg/L		08/24/22 19:20	10	2.50	08/24/22 19:20	CRD	EPA 300.0 REV 2.1
Sulfate	5900	mg/L		08/24/22 19:38	1000	1000	08/24/22 19:38	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	10.25	Feet		08/15/22 16:48	1		08/15/22 16:48	FIELD	Field*
Dissolved oxygen, Field	2.1	mg/L		08/15/22 16:48	1		08/15/22 16:48	FIELD	Field*
Oxidation Reduction Potential	-342	mV		08/15/22 16:48	1	-500	08/15/22 16:48	FIELD	Field*
pH, Field Measured	12.1	pH Units		08/15/22 16:48	1		08/15/22 16:48	FIELD	Field*
Specific Conductance, Field Measured	15300	umhos/cm		08/15/22 16:48	1		08/15/22 16:48	FIELD	Field*
Temperature, Field Measured	21.3	°C		08/15/22 16:48	1		08/15/22 16:48	FIELD	Field*
Turbidity, Field Measured	>1000	NTU		08/15/22 16:48	1	0.00	08/15/22 16:48	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 10	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	500	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Solids - total dissolved solids (TDS)	10000	mg/L	H	08/23/22 13:57	1	17	08/23/22 16:18	ZEJ	SM 2540C
Total Metals - PIA									
Boron	13000	ug/L		08/18/22 08:15	100	200	08/26/22 15:14	JMW	EPA 6020A
Calcium	28	mg/L		08/18/22 08:15	5	0.20	08/25/22 13:12	JMW	EPA 6020A
Magnesium	3.8	mg/L		08/18/22 08:15	5	0.10	08/25/22 13:12	JMW	EPA 6020A
Potassium	74	mg/L		08/18/22 08:15	5	0.20	08/25/22 13:12	JMW	EPA 6020A
Sodium	3800	mg/L		08/18/22 08:15	100	4.0	08/26/22 15:14	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FH03255-02
Name: XPW02
Alias: NEW_257_501

Sampled: 08/15/22 17:30
Received: 08/16/22 15:28
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	8.9	mg/L		08/31/22 23:02	5	5.0	08/31/22 23:02	CRD	EPA 300.0 REV 2.1
Fluoride	0.460	mg/L		08/31/22 22:44	1	0.250	08/31/22 22:44	CRD	EPA 300.0 REV 2.1
Sulfate	160	mg/L		08/31/22 23:20	25	25	08/31/22 23:20	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	7.34	Feet		08/15/22 17:30	1		08/15/22 17:30	FIELD	Field*
Dissolved oxygen, Field	0.79	mg/L		08/15/22 17:30	1		08/15/22 17:30	FIELD	Field*
Oxidation Reduction Potential	-231	mV		08/15/22 17:30	1	-500	08/15/22 17:30	FIELD	Field*
pH, Field Measured	9.73	pH Units		08/15/22 17:30	1		08/15/22 17:30	FIELD	Field*
Specific Conductance, Field Measured	547.0	umhos/cm		08/15/22 17:30	1		08/15/22 17:30	FIELD	Field*
Temperature, Field Measured	19.5	°C		08/15/22 17:30	1		08/15/22 17:30	FIELD	Field*
Turbidity, Field Measured	17.1	NTU		08/15/22 17:30	1	0.00	08/15/22 17:30	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	10	mg/L		08/26/22 17:56	1	10	08/26/22 17:56	CGL	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	30	mg/L		08/26/22 17:56	1	10	08/26/22 17:56	CGL	SM 2320B 1997*
Solids - total dissolved solids (TDS)	360	mg/L		08/19/22 11:42	1	26	08/19/22 14:19	CGL	SM 2540C
Total Metals - PIA									
Boron	2400	ug/L		08/18/22 08:15	5	10	08/25/22 13:16	JMW	EPA 6020A
Calcium	29	mg/L		08/18/22 08:15	5	0.20	08/25/22 13:16	JMW	EPA 6020A
Magnesium	0.37	mg/L		08/18/22 08:15	5	0.10	08/25/22 13:16	JMW	EPA 6020A
Potassium	15	mg/L		08/18/22 08:15	5	0.20	08/25/22 13:16	JMW	EPA 6020A
Sodium	65	mg/L		08/18/22 08:15	5	0.10	08/25/22 13:16	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FH03255-03
Name: XPW03
Alias: NEW_257_501

Sampled: 08/16/22 11:04
Received: 08/16/22 15:28
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	11	mg/L		08/30/22 05:26	5	5.0	08/30/22 05:26	CRD	EPA 300.0 REV 2.1
Fluoride	1.17	mg/L		08/30/22 05:07	1	0.250	08/30/22 05:07	CRD	EPA 300.0 REV 2.1
Sulfate	180	mg/L		08/30/22 05:45	25	25	08/30/22 05:45	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	10.25	Feet		08/16/22 11:04	1		08/16/22 11:04	FIELD	Field*
Dissolved oxygen, Field	2.4	mg/L		08/16/22 11:04	1		08/16/22 11:04	FIELD	Field*
Oxidation Reduction Potential	-205	mV		08/16/22 11:04	1	-500	08/16/22 11:04	FIELD	Field*
pH, Field Measured	11.2	pH Units		08/16/22 11:04	1		08/16/22 11:04	FIELD	Field*
Specific Conductance, Field Measured	1230	umhos/cm		08/16/22 11:04	1		08/16/22 11:04	FIELD	Field*
Temperature, Field Measured	20.6	°C		08/16/22 11:04	1		08/16/22 11:04	FIELD	Field*
Turbidity, Field Measured	14.8	NTU		08/16/22 11:04	1	0.00	08/16/22 11:04	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 10	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	150	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Solids - total dissolved solids (TDS)	590	mg/L		08/19/22 15:23	1	26	08/22/22 12:11	ZEJ	SM 2540C
Total Metals - PIA									
Boron	1400	ug/L		08/18/22 08:15	5	10	08/25/22 13:19	JMW	EPA 6020A
Calcium	30	mg/L		08/18/22 08:15	5	0.20	08/25/22 13:19	JMW	EPA 6020A
Magnesium	0.53	mg/L		08/18/22 08:15	5	0.10	08/25/22 13:19	JMW	EPA 6020A
Potassium	14	mg/L		08/18/22 08:15	5	0.20	08/25/22 13:19	JMW	EPA 6020A
Sodium	160	mg/L		08/18/22 08:15	5	0.10	08/25/22 13:19	JMW	EPA 6020A

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ANALYTICAL RESULTS

Sample: FH03255-04
Name: XPW04
Alias: NEW_257_501

Sampled: 08/16/22 10:30
Received: 08/16/22 15:28
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	54	mg/L		08/30/22 06:04	10	10	08/30/22 06:04	CRD	EPA 300.0 REV 2.1
Sulfate	4000	mg/L		08/30/22 20:41	1000	1000	08/30/22 20:41	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	12.26	Feet		08/16/22 10:30	1		08/16/22 10:30	FIELD	Field*
Dissolved oxygen, Field	1.2	mg/L		08/16/22 10:30	1		08/16/22 10:30	FIELD	Field*
Oxidation Reduction Potential	-296	mV		08/16/22 10:30	1	-500	08/16/22 10:30	FIELD	Field*
pH, Field Measured	11.4	pH Units		08/16/22 10:30	1		08/16/22 10:30	FIELD	Field*
Specific Conductance, Field Measured	12600	umhos/cm		08/16/22 10:30	1		08/16/22 10:30	FIELD	Field*
Temperature, Field Measured	20.5	°C		08/16/22 10:30	1		08/16/22 10:30	FIELD	Field*
Turbidity, Field Measured	14.7	NTU		08/16/22 10:30	1	0.00	08/16/22 10:30	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	< 10	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	150	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Fluoride	0.994	mg/L		09/01/22 11:52	1	0.250	09/01/22 11:52	TTH	SM 4500F C 1997
Solids - total dissolved solids (TDS)	9500	mg/L	H	08/25/22 16:20	1	51	08/25/22 17:36	CGL	SM 2540C
Total Metals - PIA									
Boron	3700	ug/L		08/18/22 08:15	5	10	08/29/22 14:36	JMW	EPA 6020A
Calcium	120	mg/L		08/18/22 08:15	5	0.20	08/29/22 14:36	JMW	EPA 6020A
Magnesium	0.14	mg/L		08/18/22 08:15	5	0.10	08/29/22 14:36	JMW	EPA 6020A
Potassium	87	mg/L		08/18/22 08:15	5	0.10	08/29/22 14:36	JMW	EPA 6020A
Sodium	4000	mg/L		08/18/22 08:15	100	2.0	08/30/22 09:37	JMW	EPA 6020A

Sample: FH03255-05
Name: SG02
Alias: NEW_257_501

Sampled: 08/11/22 00:00
Received: 08/16/22 15:28
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Field - PIA									
Depth, From Measuring Point	5.36	Feet		08/11/22 00:00	1		08/11/22 00:00	FIELD	Field*

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ANALYTICAL RESULTS

Sample: FH03662-01
Name: APW05
Alias: NEW_257_501

Sampled: 08/16/22 12:37
Received: 08/17/22 15:37
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	46	mg/L		08/30/22 19:11	10	10	08/30/22 19:11	CRD	EPA 300.0 REV 2.1
Fluoride	0.389	mg/L		08/30/22 02:39	1	0.250	08/30/22 02:39	CRD	EPA 300.0 REV 2.1
Sulfate	< 1.0	mg/L		08/30/22 02:39	1	1.0	08/30/22 02:39	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	14.51	Feet		08/16/22 12:37	1		08/16/22 12:37	FIELD	Field*
Dissolved oxygen, Field	0.52	mg/L		08/16/22 12:37	1		08/16/22 12:37	FIELD	Field*
Oxidation Reduction Potential	-106	mV		08/16/22 12:37	1	-500	08/16/22 12:37	FIELD	Field*
pH, Field Measured	7.32	pH Units		08/16/22 12:37	1		08/16/22 12:37	FIELD	Field*
Specific Conductance, Field Measured	935.3	umhos/cm		08/16/22 12:37	1		08/16/22 12:37	FIELD	Field*
Temperature, Field Measured	18.4	°C		08/16/22 12:37	1		08/16/22 12:37	FIELD	Field*
Turbidity, Field Measured	36.0	NTU		08/16/22 12:37	1	0.00	08/16/22 12:37	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	420	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Solids - total dissolved solids (TDS)	580	mg/L		08/19/22 15:23	1	26	08/22/22 12:11	ZEJ	SM 2540C
Total Metals - PIA									
Arsenic	21	ug/L		08/22/22 12:15	5	1.0	08/29/22 16:58	JMW	EPA 6020A
Barium	260	ug/L		08/22/22 12:15	5	1.0	08/26/22 16:19	JMW	EPA 6020A
Boron	280	ug/L		08/22/22 12:15	5	10	08/29/22 08:12	JMW	EPA 6020A
Calcium	54	mg/L		08/22/22 12:15	5	0.20	08/26/22 16:19	JMW	EPA 6020A
Chromium	< 4.0	ug/L		08/22/22 12:15	5	4.0	08/26/22 16:19	JMW	EPA 6020A
Lead	< 1.0	ug/L		08/22/22 12:15	5	1.0	08/26/22 16:19	JMW	EPA 6020A
Magnesium	29	mg/L		08/22/22 12:15	5	0.10	08/26/22 16:19	JMW	EPA 6020A
Mercury	< 0.20	ug/L		08/22/22 12:15	5	0.20	08/26/22 16:19	JMW	EPA 6020A
Molybdenum	10	ug/L		08/22/22 12:15	5	1.0	08/29/22 16:58	JMW	EPA 6020A
Potassium	1.7	mg/L		08/22/22 12:15	5	0.10	08/26/22 16:19	JMW	EPA 6020A
Selenium	< 1.0	ug/L		08/22/22 12:15	5	1.0	08/26/22 16:19	JMW	EPA 6020A
Sodium	140	mg/L		08/22/22 12:15	5	0.10	08/26/22 16:19	JMW	EPA 6020A
Lithium	< 20	ug/L		08/22/22 12:15	1	20	08/23/22 11:09	TJJ	EPA 6010B

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ANALYTICAL RESULTS

Sample: FH03662-02
Name: APW07
Alias: NEW_257_501

Sampled: 08/16/22 13:56
Received: 08/17/22 15:37
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	63	mg/L		08/30/22 19:29	10	10	08/30/22 19:29	CRD	EPA 300.0 REV 2.1
Fluoride	0.289	mg/L		08/30/22 03:15	1	0.250	08/30/22 03:15	CRD	EPA 300.0 REV 2.1
Sulfate	12	mg/L		08/30/22 03:15	10	10	08/30/22 03:33	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	46.45	Feet		08/16/22 13:56	1		08/16/22 13:56	FIELD	Field*
Dissolved oxygen, Field	0.68	mg/L		08/16/22 13:56	1		08/16/22 13:56	FIELD	Field*
Oxidation Reduction Potential	-116	mV		08/16/22 13:56	1	-500	08/16/22 13:56	FIELD	Field*
pH, Field Measured	7.14	pH Units		08/16/22 13:56	1		08/16/22 13:56	FIELD	Field*
Specific Conductance, Field Measured	1044	umhos/cm		08/16/22 13:56	1		08/16/22 13:56	FIELD	Field*
Temperature, Field Measured	17.3	°C		08/16/22 13:56	1		08/16/22 13:56	FIELD	Field*
Turbidity, Field Measured	14.8	NTU		08/16/22 13:56	1	0.00	08/16/22 13:56	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	340	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Solids - total dissolved solids (TDS)	600	mg/L		08/19/22 15:23	1	26	08/22/22 12:11	ZEJ	SM 2540C
Total Metals - PIA									
Arsenic	12	ug/L		08/22/22 12:15	5	1.0	08/29/22 17:02	JMW	EPA 6020A
Barium	510	ug/L		08/22/22 12:15	5	1.0	08/26/22 16:23	JMW	EPA 6020A
Boron	200	ug/L		08/22/22 12:15	5	10	08/29/22 08:16	JMW	EPA 6020A
Calcium	96	mg/L		08/22/22 12:15	5	0.20	08/26/22 16:23	JMW	EPA 6020A
Chromium	< 4.0	ug/L		08/22/22 12:15	5	4.0	08/26/22 16:23	JMW	EPA 6020A
Lead	< 1.0	ug/L		08/22/22 12:15	5	1.0	08/26/22 16:23	JMW	EPA 6020A
Magnesium	42	mg/L		08/22/22 12:15	5	0.10	08/26/22 16:23	JMW	EPA 6020A
Mercury	< 0.20	ug/L		08/22/22 12:15	5	0.20	08/26/22 16:23	JMW	EPA 6020A
Molybdenum	1.4	ug/L		08/22/22 12:15	5	1.0	08/29/22 17:02	JMW	EPA 6020A
Potassium	1.8	mg/L		08/22/22 12:15	5	0.10	08/26/22 16:23	JMW	EPA 6020A
Selenium	< 1.0	ug/L		08/22/22 12:15	5	1.0	08/26/22 16:23	JMW	EPA 6020A
Sodium	110	mg/L		08/22/22 12:15	5	0.10	08/26/22 16:23	JMW	EPA 6020A
Lithium	< 20	ug/L		08/22/22 12:15	1	20	08/23/22 11:11	TJJ	EPA 6010B

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ANALYTICAL RESULTS

Sample: FH03662-03
Name: APW08
Alias: NEW_257_501

Sampled: 08/16/22 15:18
Received: 08/17/22 15:37
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	56	mg/L		08/30/22 19:47	10	10	08/30/22 19:47	CRD	EPA 300.0 REV 2.1
Fluoride	0.325	mg/L		08/30/22 03:51	1	0.250	08/30/22 03:51	CRD	EPA 300.0 REV 2.1
Sulfate	44	mg/L		08/30/22 04:09	10	10	08/30/22 04:09	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	37.23	Feet		08/16/22 15:18	1		08/16/22 15:18	FIELD	Field*
Dissolved oxygen, Field	0.59	mg/L		08/16/22 15:18	1		08/16/22 15:18	FIELD	Field*
Oxidation Reduction Potential	-125	mV		08/16/22 15:18	1	-500	08/16/22 15:18	FIELD	Field*
pH, Field Measured	7.14	pH Units		08/16/22 15:18	1		08/16/22 15:18	FIELD	Field*
Specific Conductance, Field Measured	1006	umhos/cm		08/16/22 15:18	1		08/16/22 15:18	FIELD	Field*
Temperature, Field Measured	17.9	°C		08/16/22 15:18	1		08/16/22 15:18	FIELD	Field*
Turbidity, Field Measured	10.9	NTU		08/16/22 15:18	1	0.00	08/16/22 15:18	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	460	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Solids - total dissolved solids (TDS)	670	mg/L		08/19/22 15:23	1	26	08/22/22 12:11	ZEJ	SM 2540C
Total Metals - PIA									
Arsenic	22	ug/L		08/22/22 12:15	5	1.0	08/29/22 17:06	JMW	EPA 6020A
Barium	490	ug/L		08/22/22 12:15	5	1.0	08/26/22 16:27	JMW	EPA 6020A
Boron	170	ug/L		08/22/22 12:15	5	10	08/29/22 08:20	JMW	EPA 6020A
Calcium	100	mg/L		08/22/22 12:15	5	0.20	08/26/22 16:27	JMW	EPA 6020A
Chromium	< 4.0	ug/L		08/22/22 12:15	5	4.0	08/26/22 16:27	JMW	EPA 6020A
Lead	< 1.0	ug/L		08/22/22 12:15	5	1.0	08/26/22 16:27	JMW	EPA 6020A
Magnesium	44	mg/L		08/22/22 12:15	5	0.10	08/26/22 16:27	JMW	EPA 6020A
Mercury	< 0.20	ug/L		08/22/22 12:15	5	0.20	08/26/22 16:27	JMW	EPA 6020A
Molybdenum	3.7	ug/L		08/22/22 12:15	5	1.0	08/29/22 17:06	JMW	EPA 6020A
Potassium	1.9	mg/L		08/22/22 12:15	5	0.10	08/26/22 16:27	JMW	EPA 6020A
Selenium	< 1.0	ug/L		08/22/22 12:15	5	1.0	08/26/22 16:27	JMW	EPA 6020A
Sodium	93	mg/L		08/22/22 12:15	5	0.10	08/26/22 16:27	JMW	EPA 6020A
Lithium	< 20	ug/L		08/22/22 12:15	1	20	08/23/22 11:14	TJJ	EPA 6010B

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ANALYTICAL RESULTS

Sample: FH04032-01
Name: APW06
Alias: NEW_257_501

Sampled: 08/17/22 15:05
Received: 08/18/22 14:22
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	23	mg/L		08/30/22 20:59	10	10	08/30/22 20:59	CRD	EPA 300.0 REV 2.1
Fluoride	0.430	mg/L		08/30/22 04:27	1	0.250	08/30/22 04:27	CRD	EPA 300.0 REV 2.1
Sulfate	6.1	mg/L		08/30/22 04:27	1	1.0	08/30/22 04:27	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	19.6	Feet		08/17/22 15:05	1		08/17/22 15:05	FIELD	Field*
Dissolved oxygen, Field	0.90	mg/L		08/17/22 15:05	1		08/17/22 15:05	FIELD	Field*
Oxidation Reduction Potential	-147	mV		08/17/22 15:05	1	-500	08/17/22 15:05	FIELD	Field*
pH, Field Measured	7.51	pH Units		08/17/22 15:05	1		08/17/22 15:05	FIELD	Field*
Specific Conductance, Field Measured	862.3	umhos/cm		08/17/22 15:05	1		08/17/22 15:05	FIELD	Field*
Temperature, Field Measured	16.3	°C		08/17/22 15:05	1		08/17/22 15:05	FIELD	Field*
Turbidity, Field Measured	133	NTU		08/17/22 15:05	1	0.00	08/17/22 15:05	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	420	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Solids - total dissolved solids (TDS)	440	mg/L		08/23/22 13:57	1	26	08/23/22 16:18	ZEJ	SM 2540C
Total Metals - PIA									
Arsenic	6.8	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:50	JMW	EPA 6020A
Barium	220	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:50	JMW	EPA 6020A
Boron	100	ug/L		08/23/22 09:03	5	10	08/29/22 14:50	JMW	EPA 6020A
Calcium	56	mg/L		08/23/22 09:03	5	0.20	08/29/22 14:50	JMW	EPA 6020A
Chromium	< 4.0	ug/L		08/23/22 09:03	5	4.0	08/29/22 14:50	JMW	EPA 6020A
Lead	< 1.0	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:50	JMW	EPA 6020A
Magnesium	26	mg/L		08/23/22 09:03	5	0.10	08/29/22 14:50	JMW	EPA 6020A
Mercury	< 0.20	ug/L		08/23/22 09:03	5	0.20	08/29/22 16:10	JMW	EPA 6020A
Molybdenum	7.2	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:50	JMW	EPA 6020A
Potassium	1.4	mg/L		08/23/22 09:03	5	0.10	08/29/22 14:50	JMW	EPA 6020A
Selenium	< 1.0	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:50	JMW	EPA 6020A
Sodium	120	mg/L		08/23/22 09:03	5	0.10	08/29/22 14:50	JMW	EPA 6020A
Lithium	< 20	ug/L		08/23/22 09:03	1	20	09/08/22 12:26	TJJ	EPA 6010B

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ANALYTICAL RESULTS

Sample: FH04032-02
Name: APW09
Alias: NEW_257_501

Sampled: 08/17/22 12:13
Received: 08/18/22 14:22
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	140	mg/L		08/30/22 17:47	25	25	08/30/22 17:47	CRD	EPA 300.0 REV 2.1
Fluoride	0.388	mg/L		08/30/22 17:29	1	0.250	08/30/22 17:29	CRD	EPA 300.0 REV 2.1
Sulfate	9.7	mg/L		08/31/22 18:25	5	5.0	08/31/22 18:25	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	26.56	Feet		08/17/22 12:13	1		08/17/22 12:13	FIELD	Field*
Dissolved oxygen, Field	3.2	mg/L		08/17/22 12:13	1		08/17/22 12:13	FIELD	Field*
Oxidation Reduction Potential	-88.9	mV		08/17/22 12:13	1	-500	08/17/22 12:13	FIELD	Field*
pH, Field Measured	7.22	pH Units		08/17/22 12:13	1		08/17/22 12:13	FIELD	Field*
Specific Conductance, Field Measured	1416	umhos/cm		08/17/22 12:13	1		08/17/22 12:13	FIELD	Field*
Temperature, Field Measured	24.0	°C		08/17/22 12:13	1		08/17/22 12:13	FIELD	Field*
Turbidity, Field Measured	774	NTU		08/17/22 12:13	1	0.00	08/17/22 12:13	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	600	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Solids - total dissolved solids (TDS)	860	mg/L		08/24/22 10:13	1	26	08/24/22 12:08	CGL	SM 2540C
Total Metals - PIA									
Arsenic	27	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:54	JMW	EPA 6020A
Barium	440	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:54	JMW	EPA 6020A
Boron	120	ug/L		08/23/22 09:03	5	10	08/29/22 14:54	JMW	EPA 6020A
Calcium	87	mg/L		08/23/22 09:03	5	0.20	08/29/22 14:54	JMW	EPA 6020A
Chromium	8.3	ug/L		08/23/22 09:03	5	4.0	08/29/22 14:54	JMW	EPA 6020A
Lead	6.9	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:54	JMW	EPA 6020A
Magnesium	40	mg/L		08/23/22 09:03	5	0.10	08/29/22 14:54	JMW	EPA 6020A
Mercury	< 0.20	ug/L		08/23/22 09:03	5	0.20	08/29/22 16:14	JMW	EPA 6020A
Molybdenum	3.7	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:54	JMW	EPA 6020A
Potassium	1.9	mg/L		08/23/22 09:03	5	0.10	08/29/22 14:54	JMW	EPA 6020A
Selenium	< 1.0	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:54	JMW	EPA 6020A
Sodium	190	mg/L		08/23/22 09:03	5	0.10	08/29/22 14:54	JMW	EPA 6020A
Lithium	< 20	ug/L		08/23/22 09:03	1	20	09/08/22 12:28	TJJ	EPA 6010B

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ANALYTICAL RESULTS

Sample: FH04032-03
Name: APW10
Alias: NEW_257_501

Sampled: 08/17/22 13:45
Received: 08/18/22 14:22
Matrix: Ground Water - Grab
PO #: 1145007

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	51	mg/L		08/30/22 18:23	10	10	08/30/22 18:23	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		08/30/22 18:05	1	0.250	08/30/22 18:05	CRD	EPA 300.0 REV 2.1
Sulfate	440	mg/L		08/30/22 18:41	100	100	08/30/22 18:41	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	17.66	Feet		08/17/22 13:45	1		08/17/22 13:45	FIELD	Field*
Dissolved oxygen, Field	3.9	mg/L		08/17/22 13:45	1		08/17/22 13:45	FIELD	Field*
Oxidation Reduction Potential	-14.1	mV		08/17/22 13:45	1	-500	08/17/22 13:45	FIELD	Field*
pH, Field Measured	7.19	pH Units		08/17/22 13:45	1		08/17/22 13:45	FIELD	Field*
Specific Conductance, Field Measured	1496	umhos/cm		08/17/22 13:45	1		08/17/22 13:45	FIELD	Field*
Temperature, Field Measured	20.0	°C		08/17/22 13:45	1		08/17/22 13:45	FIELD	Field*
Turbidity, Field Measured	754	NTU		08/17/22 13:45	1	0.00	08/17/22 13:45	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	400	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/26/22 09:03	1	10	08/26/22 09:03	CGL	SM 2320B 1997*
Solids - total dissolved solids (TDS)	1100	mg/L		08/24/22 10:13	1	26	08/24/22 12:08	CGL	SM 2540C
Total Metals - PIA									
Arsenic	8.9	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:58	JMW	EPA 6020A
Barium	38	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:58	JMW	EPA 6020A
Boron	89	ug/L		08/23/22 09:03	5	10	08/29/22 14:58	JMW	EPA 6020A
Calcium	150	mg/L		08/23/22 09:03	5	0.20	08/29/22 14:58	JMW	EPA 6020A
Chromium	< 4.0	ug/L		08/23/22 09:03	5	4.0	08/29/22 14:58	JMW	EPA 6020A
Lead	1.3	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:58	JMW	EPA 6020A
Magnesium	69	mg/L		08/23/22 09:03	5	0.10	08/29/22 14:58	JMW	EPA 6020A
Mercury	< 0.20	ug/L		08/23/22 09:03	5	0.20	08/29/22 14:58	JMW	EPA 6020A
Molybdenum	7.0	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:58	JMW	EPA 6020A
Potassium	1.7	mg/L		08/23/22 09:03	5	0.10	08/29/22 14:58	JMW	EPA 6020A
Selenium	< 1.0	ug/L		08/23/22 09:03	5	1.0	08/29/22 14:58	JMW	EPA 6020A
Sodium	120	mg/L		08/23/22 09:03	5	0.10	08/29/22 14:58	JMW	EPA 6020A
Lithium	22	ug/L		08/23/22 09:03	1	20	09/08/22 12:30	TJJ	EPA 6010B

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B241136 - SW 3015 - EPA 6020A									
Blank (B241136-BLK1)				Prepared: 08/18/22 Analyzed: 08/24/22					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B241136-BS1)				Prepared: 08/18/22 Analyzed: 08/24/22					
Boron	493	ug/L		555.6		89	80-120		
Calcium	5.44	mg/L		5.556		98	80-120		
Magnesium	5.69	mg/L		5.556		102	80-120		
Potassium	5.50	mg/L		5.556		99	80-120		
Sodium	5.53	mg/L		5.556		100	80-120		
Batch B241298 - No Prep - SM 2540C									
Blank (B241298-BLK1)				Prepared & Analyzed: 08/19/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B241298-BS1)				Prepared & Analyzed: 08/19/22					
Solids - total dissolved solids (TDS)	950	mg/L		1000		95	84.9-109		
Batch B241342 - No Prep - SM 2540C									
Blank (B241342-BLK1)				Prepared: 08/19/22 Analyzed: 08/22/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B241342-BS1)				Prepared: 08/19/22 Analyzed: 08/22/22					
Solids - total dissolved solids (TDS)	977	mg/L		1000		98	84.9-109		
Batch B241419 - SW 3015 - EPA 6020A									
Blank (B241419-BLK1)				Prepared: 08/22/22 Analyzed: 08/26/22					
Arsenic	< 1.0	ug/L							
Barium	< 1.0	ug/L							
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Chromium	< 4.0	ug/L							
Lead	< 1.0	ug/L							
Magnesium	< 0.10	mg/L							
Mercury	< 0.20	ug/L							
Molybdenum	< 1.0	ug/L							
Potassium	< 0.10	mg/L							
Selenium	< 1.0	ug/L							
Sodium	< 0.10	mg/L							
Lithium	< 20	ug/L							
LCS (B241419-BS1)				Prepared: 08/22/22 Analyzed: 08/26/22					
Arsenic	527	ug/L		555.6		95	80-120		

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B241419 - SW 3015 - EPA 6020A									
LCS (B241419-BS1)				Prepared: 08/22/22 Analyzed: 08/26/22					
Barium	543	ug/L		555.6		98	80-120		
Boron	553	ug/L		555.6		99	80-120		
Calcium	5.46	mg/L		5.556		98	80-120		
Chromium	544	ug/L		555.6		98	80-120		
Lead	530	ug/L		555.6		95	80-120		
Magnesium	5.20	mg/L		5.556		94	80-120		
Mercury	52.1	ug/L		55.56		94	80-120		
Molybdenum	504	ug/L		555.6		91	80-120		
Potassium	5.86	mg/L		5.556		105	80-120		
Selenium	527	ug/L		555.6		95	80-120		
Sodium	6.12	mg/L		5.556		110	80-120		
Lithium	567	ug/L		555.6		102	80-120		
Batch B241512 - SW 3015 - EPA 6020A									
Blank (B241512-BLK1)				Prepared: 08/23/22 Analyzed: 08/26/22					
Arsenic	< 1.0	ug/L							
Barium	< 1.0	ug/L							
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Chromium	< 4.0	ug/L							
Lead	< 1.0	ug/L							
Magnesium	< 0.10	mg/L							
Mercury	< 0.20	ug/L							
Molybdenum	< 1.0	ug/L							
Potassium	< 0.10	mg/L							
Selenium	< 1.0	ug/L							
Sodium	< 0.10	mg/L							
Lithium	< 20	ug/L							
LCS (B241512-BS1)				Prepared: 08/23/22 Analyzed: 08/26/22					
Arsenic	531	ug/L		555.6		96	80-120		
Barium	547	ug/L		555.6		98	80-120		
Boron	662	ug/L		555.6		119	80-120		
Calcium	5.53	mg/L		5.556		100	80-120		
Chromium	544	ug/L		555.6		98	80-120		
Lead	531	ug/L		555.6		96	80-120		
Magnesium	5.21	mg/L		5.556		94	80-120		
Mercury	53.2	ug/L		55.56		96	80-120		
Molybdenum	510	ug/L		555.6		92	80-120		
Potassium	5.81	mg/L		5.556		105	80-120		
Selenium	533	ug/L		555.6		96	80-120		
Sodium	6.24	mg/L		5.556		112	80-120		
Lithium	574	ug/L		555.6		103	80-120		
Batch B241570 - No Prep - SM 2540C									

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B241570 - No Prep - SM 2540C									
Blank (B241570-BLK1)				Prepared & Analyzed: 08/23/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B241570-BS1)				Prepared & Analyzed: 08/23/22					
Solids - total dissolved solids (TDS)	987	mg/L		1000		99	84.9-109		
Batch B241686 - No Prep - SM 2540C									
Blank (B241686-BLK1)				Prepared & Analyzed: 08/24/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B241686-BS1)				Prepared & Analyzed: 08/24/22					
Solids - total dissolved solids (TDS)	977	mg/L		1000		98	84.9-109		
Duplicate (B241686-DUP1)	**Sample: FH04032-02**			Prepared & Analyzed: 08/24/22					
Solids - total dissolved solids (TDS)	815	mg/L			855			5	5
Duplicate (B241686-DUP2)	**Sample: FH04032-03**			Prepared & Analyzed: 08/24/22					
Solids - total dissolved solids (TDS)	1100	mg/L			1060			3	5
Batch B241831 - No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B241831-CCB1)				Prepared & Analyzed: 08/24/22					
Sulfate	0.00	mg/L							
Fluoride	0.00	mg/L							
Chloride	0.0687	mg/L							
Calibration Check (B241831-CCV1)				Prepared & Analyzed: 08/24/22					
Fluoride	5.02	mg/L		5.000		100	90-110		
Sulfate	4.94	mg/L		5.000		99	90-110		
Chloride	4.59	mg/L		5.000		92	90-110		
Batch B241894 - No Prep - SM 2540C									
Blank (B241894-BLK1)				Prepared & Analyzed: 08/25/22					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B241894-BS1)				Prepared & Analyzed: 08/25/22					
Solids - total dissolved solids (TDS)	967	mg/L		1000		97	84.9-109		
Batch B242067 - No Prep - SM 2320B 1997									
Blank (B242067-BLK1)				Prepared & Analyzed: 08/26/22					
Alkalinity - bicarbonate as CaCO3	< 2.0	mg/L							
LCS (B242067-BS1)				Prepared & Analyzed: 08/26/22					
Alkalinity - bicarbonate as CaCO3	60.0	mg/L					90-110		
Duplicate (B242067-DUP1)	**Sample: FH03255-02**			Prepared & Analyzed: 08/26/22					
Alkalinity - bicarbonate as CaCO3	12.5	mg/L			10.0			22	10
Batch B242070 - No Prep - SM 2320B 1997									
Blank (B242070-BLK1)				Prepared & Analyzed: 08/26/22					
Alkalinity - carbonate as CaCO3	< 2.0	mg/L							
Calibration Check (B242070-CCV1)				Prepared & Analyzed: 08/29/22					
Alkalinity - carbonate as CaCO3	< 2.0	mg/L					0-200		
Calibration Check (B242070-CCV2)				Prepared & Analyzed: 08/29/22					

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2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B242070 - No Prep - SM 2320B 1997									
Calibration Check (B242070-CCV2)				Prepared & Analyzed: 08/29/22					
Alkalinity - carbonate as CaCO3	< 2.0	mg/L					0-200		
Duplicate (B242070-DUP1)	**Sample: FH03255-02**			Prepared & Analyzed: 08/26/22					
Alkalinity - carbonate as CaCO3	30.0	mg/L			30.0			0	10
Batch B242277 - No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B242277-CCB1)				Prepared & Analyzed: 08/29/22					
Sulfate	0.00	mg/L							
Fluoride	0.00	mg/L							
Chloride	0.610	mg/L							
Calibration Check (B242277-CCV1)				Prepared & Analyzed: 08/29/22					
Chloride	4.59	mg/L		5.000		92	90-110		
Fluoride	4.88	mg/L		5.000		98	90-110		
Sulfate	4.83	mg/L		5.000		97	90-110		
Batch B242278 - No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B242278-CCB1)				Prepared & Analyzed: 08/29/22					
Fluoride	0.00	mg/L							
Sulfate	0.00	mg/L							
Calibration Check (B242278-CCV1)				Prepared & Analyzed: 08/29/22					
Fluoride	4.80	mg/L		5.000		96	90-110		
Sulfate	4.74	mg/L		5.000		95	90-110		
Batch B242413 - No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B242413-CCB1)				Prepared & Analyzed: 08/30/22					
Sulfate	0.00	mg/L							
Chloride	0.00	mg/L							
Calibration Blank (B242413-CCB2)				Prepared & Analyzed: 08/30/22					
Sulfate	0.00	mg/L							
Chloride	0.00	mg/L							
Calibration Check (B242413-CCV1)				Prepared & Analyzed: 08/30/22					
Sulfate	5.29	mg/L		5.000		106	90-110		
Chloride	5.19	mg/L		5.000		104	90-110		
Calibration Check (B242413-CCV2)				Prepared & Analyzed: 08/30/22					
Chloride	4.79	mg/L		5.000		96	90-110		
Sulfate	4.91	mg/L		5.000		98	90-110		
Batch B242415 - No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B242415-CCB1)				Prepared & Analyzed: 08/30/22					
Fluoride	0.00	mg/L							
Chloride	0.578	mg/L							
Calibration Blank (B242415-CCB2)				Prepared & Analyzed: 08/30/22					
Chloride	0.611	mg/L							
Fluoride	0.00	mg/L							
Calibration Check (B242415-CCV1)				Prepared & Analyzed: 08/30/22					

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B242415 - No Prep - EPA 300.0 REV 2.1									
Calibration Check (B242415-CCV1)				Prepared & Analyzed: 08/30/22					
Chloride	4.99	mg/L		5.000		100	90-110		
Fluoride	5.11	mg/L		5.000		102	90-110		
Calibration Check (B242415-CCV2)				Prepared & Analyzed: 08/30/22					
Fluoride	4.89	mg/L		5.000		98	90-110		
Chloride	4.81	mg/L		5.000		96	90-110		
Batch B242487 - No Prep - SM 4500F C 1997									
Calibration Blank (B242487-CCB1)				Prepared & Analyzed: 09/01/22					
Fluoride	0.00900	mg/L							
Calibration Blank (B242487-CCB2)				Prepared & Analyzed: 09/01/22					
Fluoride	0.00900	mg/L							
Calibration Check (B242487-CCV1)				Prepared & Analyzed: 09/01/22					
Fluoride	0.665	mg/L		0.7000		95	90-110		
Calibration Check (B242487-CCV2)				Prepared & Analyzed: 09/01/22					
Fluoride	0.689	mg/L		0.7000		98	90-110		
Batch B242494 - No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B242494-CCB1)				Prepared & Analyzed: 08/31/22					
Sulfate	0.00	mg/L							
Calibration Check (B242494-CCV1)				Prepared & Analyzed: 08/31/22					
Sulfate	5.08	mg/L		5.000		102	90-110		
Batch B242498 - No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B242498-CCB1)				Prepared & Analyzed: 08/31/22					
Sulfate	0.00	mg/L							
Chloride	0.260	mg/L							
Fluoride	0.00	mg/L							
Calibration Check (B242498-CCV1)				Prepared & Analyzed: 08/31/22					
Sulfate	5.02	mg/L		5.000		100	90-110		
Chloride	4.89	mg/L		5.000		98	90-110		
Fluoride	5.14	mg/L		5.000		103	90-110		

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NOTES

Specifications regarding method revisions, method modifications, and calculations used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Memos

TDS for XPW01 and XPW04 originally set within hold time but wiegh back did not meet acceptance criteria. Samples were reset out of hold time.

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050
TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615
TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)
Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)
Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807
USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050
Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

H Test performed after the expiration of the appropriate regulatory/advisory maximum allowable hold time.

Gail J Schindler

Certified by: Gail Schindler, Project Manager

ANALYTICAL REPORT

September 26, 2022

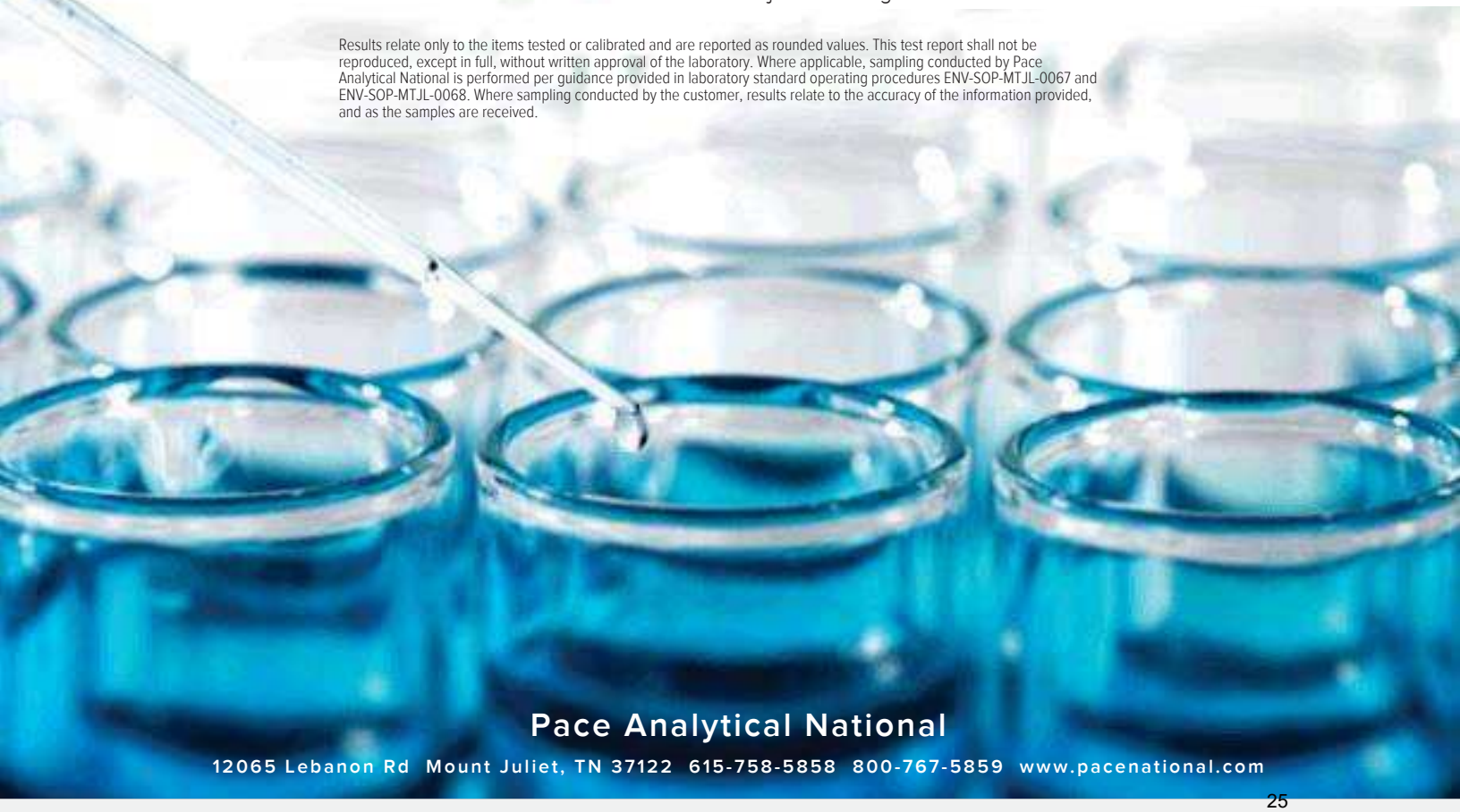
Pace IR - Peoria, IL

Sample Delivery Group:	L1529819
Samples Received:	08/26/2022
Project Number:	FH03663
Description:	Vistra-Newton
Site:	001
Report To:	Gail Schindler 2231 W. Altorfer Drive Peoria, IL 61615

Entire Report Reviewed By:

Donna Eidson
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

APW05 L1529819-01 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/16/22 12:37	08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926317	1	09/16/22 09:08	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1918066	1	09/06/22 12:30	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1918066	1	09/06/22 12:30	09/07/22 11:34	RGT	Mt. Juliet, TN

APW07 L1529819-02 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/16/22 13:56	08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926317	1	09/16/22 09:08	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1918066	1	09/06/22 12:30	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1918066	1	09/06/22 12:30	09/07/22 11:34	RGT	Mt. Juliet, TN

APW08 L1529819-03 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/16/22 15:18	08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926317	1	09/16/22 09:08	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1918066	1	09/06/22 12:30	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1918066	1	09/06/22 12:30	09/07/22 11:34	RGT	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Donna Eidson
Project Manager

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.180	U	0.332	0.600	09/21/2022 10:18	WG1926317
(T) Barium	*74.1*			*30.0-143*	*09/21/2022 10:18*	WG1926317
(T) Yttrium	*98.7*			*30.0-136*	*09/21/2022 10:18*	WG1926317

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.248	U	0.365	0.655	09/21/2022 10:18	WG1918066

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.0678	U	0.151	0.262	09/07/2022 11:34	WG1918066
(T) Barium-133	*93.7*			*30.0-143*	*09/07/2022 11:34*	WG1918066

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.28		0.295	0.494	09/21/2022 10:18	WG1926317
(T) Barium	*81.9*			*30.0-143*	*09/21/2022 10:18*	WG1926317
(T) Yttrium	*98.2*			*30.0-136*	*09/21/2022 10:18*	WG1926317

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.91		0.416	0.535	09/21/2022 10:18	WG1918066

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.631		0.294	0.205	09/07/2022 11:34	WG1918066
(T) Barium-133	*93.2*			*30.0-143*	*09/07/2022 11:34*	WG1918066

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.79		0.349	0.575	09/21/2022 10:18	WG1926317
(T) Barium	*75.3*			*30.0-143*	*09/21/2022 10:18*	WG1926317
(T) Yttrium	*93.1*			*30.0-136*	*09/21/2022 10:18*	WG1926317

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	2.28		0.427	0.606	09/21/2022 10:18	WG1918066

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.489		0.246	0.190	09/07/2022 11:34	WG1918066
(T) Barium-133	*96.6*			*30.0-143*	*09/07/2022 11:34*	WG1918066

QUALITY CONTROL SUMMARY

L1529819-01,02,03

Method Blank (MB)

(MB) R3840688-5 09/23/22 10:29

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.144	U	0.142	0.411
(T) Barium	*94.3*		*94.3*	
(T) Yttrium	*100*		*100*	

L1529819-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1529819-03 09/21/22 10:18 • (DUP) R3840688-4 09/21/22 10:18

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	1.79	0.349	0.575	1.19	0.361	0.575	1	40.6	1.20		20	3
(T) Barium	*75.3*			*72.9*	*72.9*							
(T) Yttrium	*93.1*			*98.0*	*98.0*							

Laboratory Control Sample (LCS)

(LCS) R3840688-1 09/21/22 10:18

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.32	106	80.0-120	
(T) Barium			*92.5*		
(T) Yttrium			*90.4*		

L1529883-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529883-01 09/21/22 10:18 • (MS) R3840688-2 09/21/22 10:18 • (MSD) R3840688-3 09/21/22 10:18

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.399	17.0	15.8	99.4	92.3	1	70.0-130			7.19		20
(T) Barium		*77.6*			*78.0*	*80.4*							
(T) Yttrium		*89.0*			*101*	*103*							

Method Blank (MB)

(MB) R3839352-1 09/07/22 11:34

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.00158	U	0.0374	0.0715
(T) Barium-133	*100*		*100*	

L1529819-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1529819-03 09/07/22 11:34 • (DUP) R3839352-5 09/07/22 11:34

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.489	0.246	0.190	0.177	0.183	0.190	1	93.9	1.02	J	20	3
(T) Barium-133	*96.6*			*94.7*	*94.7*							

Laboratory Control Sample (LCS)

(LCS) R3839352-2 09/07/22 11:34

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.02	5.12	102	80.0-120	
(T) Barium-133			*96.4*		

L1529803-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529803-01 09/07/22 11:34 • (MS) R3839352-3 09/07/22 11:34 • (MSD) R3839352-4 09/07/22 11:34

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.311	19.5	19.2	95.7	94.3	1	75.0-125			1.50		20
(T) Barium-133		*91.7*			*97.2*	*94.1*							

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

A075

Internal Transfer Chain of Custody

Pace Analytical
www.pacelabs.com

State of Origin: IL
Cert. Needed: [X] YES [ ] NO

Workorder: FH03663 **Workorder Name:** VISTRA - NEWTON **Owner Received Date:** 8/17/2022 **Results Requested By:** 9/19/2022

Report To:	Subcontract To:
Gail Schindler Pace Analytical - IL/MO 2231 W. Altorfer Drive Peoria, IL 61615 800-752-6651	Pace Analytical Services, LLC 12065 Lebanon Rd Mt Juliet, TN (615)758-5858

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Requested Analysis: Radium 226/228	LAB USE ONLY
1	APW05	Grab	8/16/2022 12:37	FH03663-01	GW		X	-01
2	APW07	Grab	8/16/2022 13:56	FH03663-02	GW		X	-02
3	APW08	Grab	8/16/2022 15:18	FH03663-03	GW		X	-03
4								
5								
6								
7								
8								
9								
10								

L529819

LAB USE ONLY

Transfers	Released By	Date/Time	Reveived By	Date/Time	Comments
1	[illegible]	8/23/22 0757	[illegible]	8/26/22 900	Needs reported as 226, 228 and also combined 226/228 Include QC summary
2					
3					

Cooler Temperature on Receipt _____ °C	Custody Seal Y or N	Received on Ice Y or N	Sample Intact Y or N
	(Y)	(Y)	(Y)

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

FMT-ALL-C-002rev.00 24March2009 Page 1 of 1

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Sample Receipt Checklist

		If Applicable	
COC Seal Present/Intact:	Y N	VOA Zero Headspace:	Y N
COC Signed/Accurate:	Y N	Pres.Correct/Check:	Y N
Bottles arrive intact:	Y N		
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

5344 4102 6985

RRA6

23.5+0=23.5

ANALYTICAL REPORT

September 26, 2022

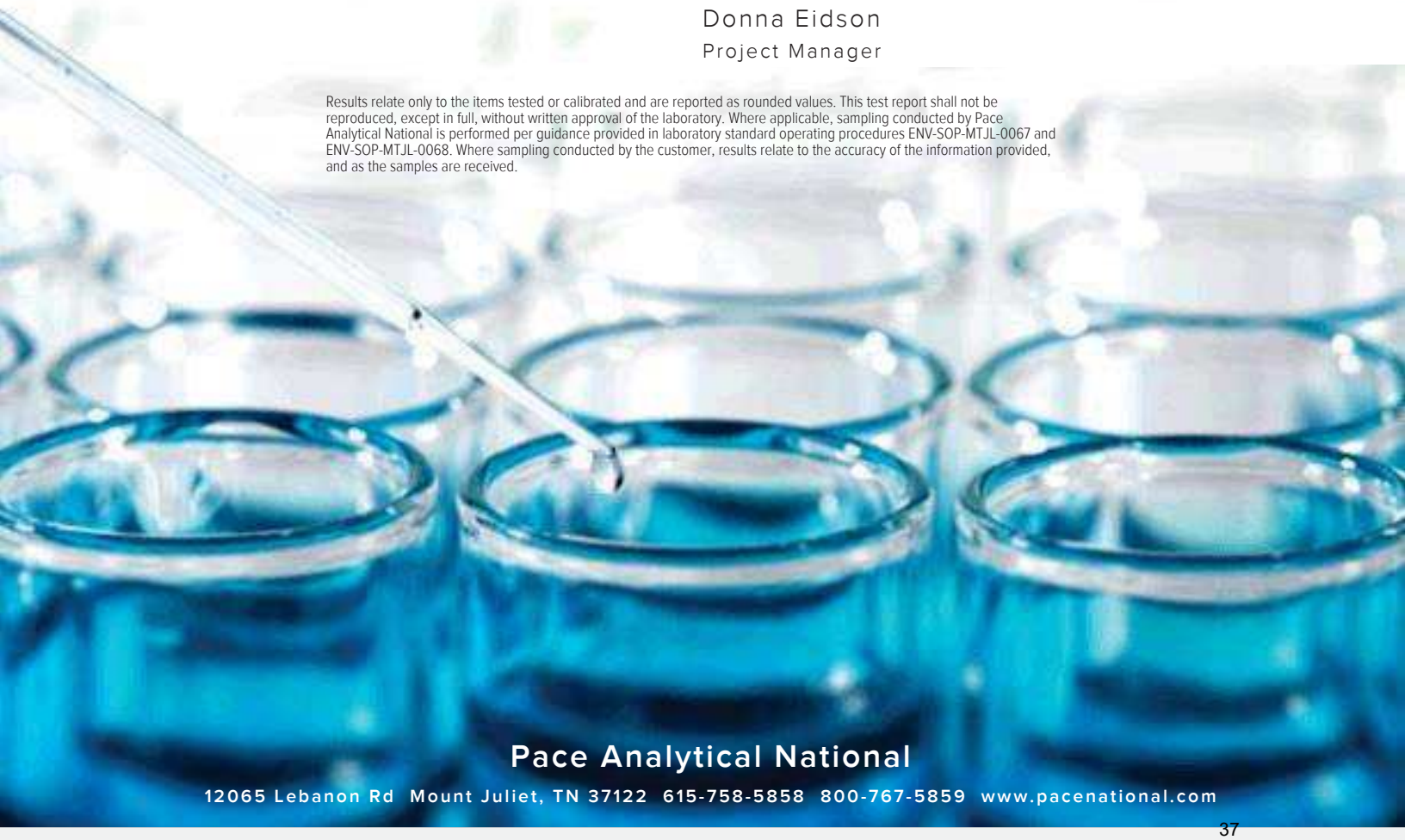
Pace IR - Peoria, IL

Sample Delivery Group:	L1529816
Samples Received:	08/26/2022
Project Number:	FH04033
Description:	Vistra-Newton
Site:	001
Report To:	Gail Schindler 2231 W. Altorfer Drive Peoria, IL 61615

Entire Report Reviewed By:

Donna Eidson
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

APW06 L1529816-01 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/17/22 15:05	08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926317	1	09/16/22 09:08	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1918066	1	09/06/22 12:30	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1918066	1	09/06/22 12:30	09/07/22 11:34	RGT	Mt. Juliet, TN

APW09 L1529816-02 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/17/22 12:13	08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926317	1	09/16/22 09:08	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1918066	1	09/06/22 12:30	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1918066	1	09/06/22 12:30	09/07/22 11:34	RGT	Mt. Juliet, TN

APW10 L1529816-03 Non-Potable Water

Collected by	Collected date/time	Received date/time
	08/17/22 13:45	08/26/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG1926317	1	09/16/22 09:08	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG1918066	1	09/06/22 12:30	09/21/22 10:18	SWM	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1918066	1	09/06/22 12:30	09/07/22 11:34	RGT	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Donna Eidson
Project Manager

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.996		0.312	0.539	09/21/2022 10:18	WG1926317
(T) Barium	*75.5*			*30.0-143*	*09/21/2022 10:18*	WG1926317
(T) Yttrium	*102*			*30.0-136*	*09/21/2022 10:18*	WG1926317

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.12		0.371	0.620	09/21/2022 10:18	WG1918066

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.125	J	0.200	0.307	09/07/2022 11:34	WG1918066
(T) Barium-133	*91.9*			*30.0-143*	*09/07/2022 11:34*	WG1918066

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	8.46		0.597	0.838	09/21/2022 10:18	WG1926317
(T) Barium	*65.4*			*30.0-143*	*09/21/2022 10:18*	WG1926317
(T) Yttrium	*95.3*			*30.0-136*	*09/21/2022 10:18*	WG1926317

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	9.42		0.702	0.868	09/21/2022 10:18	WG1918066

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.966		0.370	0.228	09/07/2022 11:34	WG1918066
(T) Barium-133	*102*			*30.0-143*	*09/07/2022 11:34*	WG1918066

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-228	-0.573	U	0.437	0.825	09/21/2022 10:18	WG1926317
(T) Barium	*68.1*			*30.0-143*	*09/21/2022 10:18*	WG1926317
(T) Yttrium	*87.9*			*30.0-136*	*09/21/2022 10:18*	WG1926317

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.289	U	0.484	0.852	09/21/2022 10:18	WG1918066

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.289		0.208	0.212	09/07/2022 11:34	WG1918066
(T) Barium-133	*104*			*30.0-143*	*09/07/2022 11:34*	WG1918066

Method Blank (MB)

(MB) R3840688-5 09/23/22 10:29

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / - pCi/l	MB MDA pCi/l
Radium-228	0.144	U	0.142	0.411
(T) Barium	*94.3*		*94.3*	
(T) Yttrium	*100*		*100*	

L1529819-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1529819-03 09/21/22 10:18 • (DUP) R3840688-4 09/21/22 10:18

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	1.79	0.349	0.575	1.19	0.361	0.575	1	40.6	1.20		20	3
(T) Barium	*75.3*			*72.9*	*72.9*							
(T) Yttrium	*93.1*			*98.0*	*98.0*							

Laboratory Control Sample (LCS)

(LCS) R3840688-1 09/21/22 10:18

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.32	106	80.0-120	
(T) Barium			*92.5*		
(T) Yttrium			*90.4*		

L1529883-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529883-01 09/21/22 10:18 • (MS) R3840688-2 09/21/22 10:18 • (MSD) R3840688-3 09/21/22 10:18

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.399	17.0	15.8	99.4	92.3	1	70.0-130			7.19		20
(T) Barium		*77.6*			*78.0*	*80.4*							
(T) Yttrium		*89.0*			*101*	*103*							

Method Blank (MB)

(MB) R3839352-1 09/07/22 11:34

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.00158	U	0.0374	0.0715
(T) Barium-133	*100*		*100*	

L1529819-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1529819-03 09/07/22 11:34 • (DUP) R3839352-5 09/07/22 11:34

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.489	0.246	0.190	0.177	0.183	0.190	1	93.9	1.02	J	20	3
(T) Barium-133	*96.6*			*94.7*	*94.7*							

Laboratory Control Sample (LCS)

(LCS) R3839352-2 09/07/22 11:34

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.02	5.12	102	80.0-120	
(T) Barium-133			*96.4*		

L1529803-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1529803-01 09/07/22 11:34 • (MS) R3839352-3 09/07/22 11:34 • (MSD) R3839352-4 09/07/22 11:34

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.311	19.5	19.2	95.7	94.3	1	75.0-125			1.50		20
(T) Barium-133		*91.7*			*97.2*	*94.1*							

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

A073

Internal Transfer Chain of Custody

State of Origin: IL
Cert. Needed: [X] YES [ ] NO

Pace Analytical
www.pacelabs.com

Workorder: FH04033 **Workorder Name:** VISTRA - NEWTON **Owner Received Date:** 8/18/2022 **Results Requested By:** 9/19/2022

Report To:	Subcontract To:
Gail Schindler Pace Analytical - IL/MO 2231 W. Altorfer Drive Peoria, IL 61615 800-752-6651	Pace Analytical Services, LLC 12065 Lebanon Rd Mt Juliet, TN (615)758-5858

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Requested Analysis: Radium 226/228	LAB USE ONLY
1	APW06	Grab	8/17/2022 15:05	FH04033-01	GW		X	-01
2	APW09	Grab	8/17/2022 12:13	FH04033-02	GW		X	-02
3	APW10	Grab	8/17/2022 13:45	FH04033-03	GW		X	-03
4								
5								
6								
7								
8								
9								
10								

U529816

Transfers	Released By	Date/Time	Reveived By	Date/Time	Comments
1	[illegible]	8/23/22 0756	[illegible]	8/26/22 900	Needs reported as 226, 228 and also combined 226/228 Include QC summary
2					
3					

Cooler Temperature on Receipt _____ °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Sample Intact** Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

5344 402 6985
RRAG
23.5 to = 23.5

FH032-SS

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:

Company:	Vistra Corp
Address:	13498 E. 900th St
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	standard

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Jason Stuckey
Purchase Order No.:	
Project Name:	Newton
Project Number:	2285

Section C Invoice Information:

Attention:	Jason Stuckey
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	NEW-257-501	NEW-257-502	NEW-811-502	NEW-811-503	NEW-22Q3-NEW-NPDES-501	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	S101	WT	G	8/15/22	1749		6																
2	G125	WT	G	8/15/22	1443		4																
3	G208				1708		2																
4	A214				1800		4																
5	A215				1559		4																
6	G217S				1352		4																
7	R217D				1647		6																
8	G220				1748		2																
9	G223				1457		2																
10	G224				1356		2																
11	XPW01				1648		2																
12	XPW02	↓	↓	↓	1730		2																
13																							
14																							
15																							
16																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
NEW-Q3-2022	Joseph R Reed	8/16/22	1528		8/16/22	1528	2.4 / Y / — / Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Reed

SIGNATURE of SAMPLER: Joseph R Reed

DATE Signed (MM/DD/YY): 8/16/22

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:

Company:	Vistra Corp
Address:	13498 E. 900th St
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	standard

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Jason Stuckey
Purchase Order No.:	
Project Name:	Newton
Project Number:	2285

Section C Invoice Information:

Attention:	Jason Stuckey
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis Filtered (Y/N)	Analysis Test →	NEW-257-501	NEW-257-502	NEW-811-502	NEW-811-503	NEW-22Q3-NEW-NPDES-501	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	L1R	WT	G	8/16/22	1144		6																	
2	T101				1017		7																	
3	S102				1122		7																	
4	T102				1057		7																	
5	G106				1130		4																	
6	G06D				1030		2																	
7	G104				1033		4																	
8	XPW03				1104		2																	
9	XPW04				1030		2																	
10																								
11																								
12																								
13																								
14																								
15																								
16																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
NEW-Q3-2022	Joseph R Ruck	8/16/22	1528		8/16/22	1528	2.4	Y	—	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joe Ruck

SIGNATURE of SAMPLER: Joseph R Ruck

DATE Signed (MM/DD/YY): 8/16/22

FH03662

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 5

Section A Required Client Information:

Company:	Vistra Corp
Address:	13498 E. 900th St
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	standard

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Jason Stuckey
Purchase Order No.:	
Project Name:	Newton
Project Number:	2285

Section C Invoice Information:

Attention:	Jason Stuckey
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test ↓ / Y/N ↓: NEW-257-501	NEW-257-502	NEW-811-502	NEW-811-503	NEW-22Q3-NEW-NPDES-501	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	G48 MG	WT	G	8/16/22	1322		2	X		X												
2	G133	WT	G	8/16/22	1645		4	X	X	X		X										
3	G136	WT	G	8/16/22	1607		4	X	X	X		X										
4	G134	WT	G	8/16/22	1527		4	X	X	X		X										
5	G141	WT	G	8/16/22	1415		4	X	X	X		X										
6	A123	WT	G	8/16/22	1701		4	X	X	X		X										
7	G221	WT	G	8/16/22	1517		4	X	X	X		X										
8	G222	WT	G	8/16/22	1347		2	X		X												
9	G225	WT	G	8/16/22	1301		4	X	X	X		X										
10	APW05	WT	G	8/16/22	1237		3	X		X												
11	APW07	WT	G	8/16/22	1356		3	X		X												
12	APW08	WT	G	8/16/22	1518		3	X		X												
13	G130	WT	G	8/17/22	0958		4	X	X	X		X										
14	G128	WT	G	8/17/22	1105		4	X	X	X		X										
15	APW02	WT	G	8/17/22	951		2	X		X												
16	APW03	WT	G	8/17/22	1043		2	X		X												

ADDITIONAL COMMENTS

NEW-Q3-2022

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	8/17/22	1136	R Rauff	8/17/22	1147
	8/17/22	1537		8/17/22	1537

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
4.3	Y	-	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: AP, MC, AM, SG, DE

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 8/16/2022

FH03663

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:

Company:	Vistra Corp
Address:	13498 E. 900th St
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	standard

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Jason Stuckey
Purchase Order No.:	
Project Name:	Newton
Project Number:	2285

Section C Invoice Information:

Attention:	Jason Stuckey
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	NEW-257-501	NEW-257-502	NEW-811-502	NEW-811-503	NEW-22Q3-NEW-NPDES-501	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	G4E MG	WT	G	8/16/22	1322		2	X		X													
2	G133	WT	G	8/16/22	1645		4	X	X	X		X											
3	G136	WT	G	8/16/22	1607		4	X	X	X		X											
4	G134	WT	G	8/16/22	1527		4	X	X	X		X											
5	G141	WT	G	8/16/22	1415		4	X	X	X		X											
6	A123	WT	G	8/16/22	1701		4	X	X	X		X											
7	G221	WT	G	8/16/22	1517		4	X	X	X		X											
8	G222	WT	G	8/16/22	1347		2	X		X													
9	G225	WT	G	8/16/22	1301		4	X	X	X		X											
10	APW05	WT	G	8/16/22	1237		3	X		X													
11	APW07	WT	G	8/16/22	1356		2	X		X													
12	APW08	WT	G	8/16/22	1518		3	X		X													
13	G130	WT	G	8/17/22	0958		4	X	X	X		X											
14	G128	WT	G	8/17/22	1105		4	X	X	X		X											
15	APW02	WT	G	8/17/22	951		2	X		X													
16	APW03	WT	G	8/17/22	1043		2	X		X													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
NEW-Q3-2022		8/17/22	1136		1147	8/19/22	
		8/17/22	1937		1537	8/17/22	4.3 / Y / — / Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: AP, AC, AM, SG, DE

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/16/2022

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

FH04032/FH04033

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:

Company:	Vistra Corp
Address:	13498 E. 900th St
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	standard

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Jason Stuckey
Purchase Order No.:	
Project Name:	
Project Number:	2285

Section C Invoice Information:

Attention:	Jason Stuckey
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES | GROUND WATER | DRINKING WATER
UST | RCRA | OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test ↓ / Y/N ↓	NEW-257-501	NEW-257-502	NEW-811-502	NEW-811-503	NEW-22Q3-NEW-NPDES-501	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	APW04	WT	G	8/17/22	1256		2	X		X													
2	APW06	WT	G	8/17/22	1505		3	X		X													
3	APW09	WT	G	8/17/22	1213		3	X		X													
4	APW10	WT	G	8/17/22	1345		3	X		X													
5	G105	WT	G	8/17/22	1216		4	X	X	X		X											
6	G201	WT	G	8/17/22	1405		6	X	X	X		X											
7	R201	WT	G	8/17/22	1450		6	X	X	X		X											
8	R219	WT	G	8/17/22	1315		4	X	X	X		X											
9	G230	WT	G	8/17/22	1449		2	X		X													
10	G231	WT	G	8/17/22	1555		2	X		X													
11	G232	WT	G	8/17/22	1630		2	X		X													
12	G234	WT	G	8/17/22	1611		2	X		X													
13	G116	WT	G	8/18/22	1010		4	X	X	X		X											
14	G233	WT	G	8/18/22	0908		2	X		X													
15	L301	WT	G	8/18/22	0902		2	X		X													
16																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
NEW-Q3-2022		8/18/22	1330	Paul Schneider	8/18/22	1422

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.5	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: AP, NL, AM, SG, DS

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/17/2022

FH04032/FH04033

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:

Company:	Vistra Corp
Address:	13498 E. 900th St
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	standard

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Jason Stuckey
Purchase Order No.:	
Project Name:	
Project Number:	2285

Section C Invoice Information:

Attention:	Jason Stuckey
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES | GROUND WATER | DRINKING WATER
UST | RCRA | OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test ↓ / Y/N ↓	NEW-257-501	NEW-257-502	NEW-811-502	NEW-811-503	NEW-22Q3-NEW-NPDES-501	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	APW04	WT	G	8/17/22	1256		2	X		X													
2	APW06	WT	G	8/17/22	1505		3	X		X													
3	APW09	WT	G	8/17/22	1213		3	X		X													
4	APW10	WT	G	8/17/22	1345		3	X		X													
5	G105	WT	G	8/17/22	1216		4	X	X	X		X											
6	G201	WT	G	8/17/22	1405		6	X	X	X		X											
7	R201	WT	G	8/17/22	1450		6	X	X	X		X											
8	R219	WT	G	8/17/22	1315		4	X	X	X		X											
9	G230	WT	G	8/17/22	1449		2	X		X													
10	G231	WT	G	8/17/22	1555		2	X		X													
11	G232	WT	G	8/17/22	1630		2	X		X													
12	G234	WT	G	8/17/22	1611		2	X		X													
13	G116	WT	G	8/18/22	1010		4	X	X	X		X											
14	G233	WT	G	8/18/22	0908		2	X		X													
15	L301	WT	G	8/18/22	0902		2	X		X													
16																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
NEW-Q3-2022		8/18/22	1330	Paul Schneider	8/18/22	1422

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.5	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: AP, NL, AM, SG, DS

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/17/2022

NEWTON

WELL/SAMPLE POINT XPW01 **Purge Method:** Bladder Pump

Date: 8/15/22 Start Time: 1615 Finish/Sample Time: 1648

Well Depth (Bottom) From MP: Pump ft Min. Purge Volume: 1.5 Gal / L

Depth to Water From MP: 10.25 ft Total Purge Volume: 2.1 Gal / L

Water Column Length: _____ ft Max Drawdown: ~~TR 0~~ ft

Well Water Volume: _____ Gal / L Total Drawdown: 0.0 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)	
1	1635	10.25	100	12.05	15400	21.38	-342	2.20	~~0.0~~	>1000
2	1637	10.25	100	12.06	15400	21.33	-342	2.14	~~0.0~~	>1000
3	1639	10.25	100	12.07	15300	21.29	-342	2.09	~~0.0~~	>1000
4										
5										
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA	

Field Meter: Horiba

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☐ Slight ☐ Mod. ☒ Strong

Turb: ☐ None ☐ Slight ☐ Mod ☒ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, 250 mL)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 10.25 ft

Comments

Sampler's Signature: Joseph R Reed

NEWTON

WELL/SAMPLE POINT XPW02 **Purge Method:** Bladder Pump

Date: 8/15/22 Start Time: 1659 Finish/Sample Time: 1730

Well Depth (Bottom) From MP: Pump ft Min. Purge Volume: _____ Gal / L

Depth to Water From MP: 7.34 ft Total Purge Volume: _____ Gal / L

Water Column Length: _____ ft Max Drawdown: _____ ft

Well Water Volume: _____ Gal / L JR Total Drawdown: _____ ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	17 14	7.35	558	9.76	100	19.30	-231	1.02	20.1
2	17 16	7.35	552	9.75	100	19.37	-229	0.90	16.4
3	17 18	7.35	547	9.73	100	19.47	-231	0.79	17.1
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☒ Slight ☐ Mod. ☐ Strong

Turb: ☒ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, 250 mL)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 7.35 ft

Comments

Sampler's Signature: Joseph R Rud

NEWTON

WELL/SAMPLE POINT ~~XPW04~~ XPW03 **Purge Method:** Bladder

Date: 8/16/22 Start Time: 1042 Finish/Sample Time: 1104

Well Depth (Bottom) From MP: ~~10.25~~ JR ft Pump

Depth to Water From MP: 10.25 ft

Water Column Length: ~ ft

Well Water Volume: ~ Gal / L

Min. Purge Volume: 1.5 Gal / L

Total Purge Volume: 2.1 Gal / L

Max Drawdown: ~ ft

Total Drawdown: 0.01 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1055	10.26	100	11.21	1240	20.79	-194	2.70	29.7
2	1057	10.26	100	11.20	1230	20.71	-201	2.56	16.9
3	1059	10.26	100	11.19	1230	20.65	-205	2.41	14.8
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ☐ None ☒ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☒ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, 250 mL)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 10.26 ft

Comments

Sampler's Signature: Joseph R Reed

NEWTON

WELL/SAMPLE POINT ~~XPW03~~ XPW04 **Purge Method:** Bladder

Date: 8/16/22 Start Time: 942 Finish/Sample Time: 1030

Well Depth (Bottom) From MP: ~~12.26~~ JR Pump ft

Depth to Water From MP: 12.26 ft

Water Column Length: — ft

Well Water Volume: — Gal / L

Min. Purge Volume: 1.5 Gal / L

Total Purge Volume: 2.1 Gal / L

Max Drawdown: — ft

Total Drawdown: 0.08 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1001	12.34	100	11.45	12600	20.46	-296	1.21	~~>1000~~ 6.6
2	1003	12.34	100	11.45	12601	20.50	-295	1.19	~~>1000~~ 20.1
3	1005	1234	100	11.45	12600	20.47	-296	1.18	~~>1000~~ 14.7 JR
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☒ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, 250 mL)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 1234 ft

Comments

Sampler's Signature: Joseph R Reed

Newton

WELL/SAMPLE POINT ~~APW2~~ APW05 **Purge Method:** Compressor

Date: 16-Aug-22 Start Time: 1145 AM Finish/Sample Time: 1237

Well Depth (Bottom) From MP:	24.02 ft	Min. Purge Volume:	Gal / L
Depth to Water From MP:	14.51 ft	Total Purge Volume:	1.3 Gal / L
Water Column Length:	9.51 ft	Max Drawdown:	— ft
Well Water Volume:	5.76 Gal / L	Total Drawdown:	0 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		(ft.)	(mL/min)	(s.u.)	(umhos/cm)	(deg C)	(mV)	(mg/L)	(NTU)
1	1203	14.51	100	7.33	940.81	18.85	-94.0	0.75	35.18
2	1204	14.51		7.32	937.81	18.60	-101.5	0.61	35.87
3	1205	14.51	—	7.32	935.28	18.43	-105.9	0.52	35.96
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT 600

Sample Appearance:

Odor: ☑ None ☐ Slight ☐ Mod. ☐ Strong

Color ☑ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☑ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, 250 mL) Soonr
1	P 2.5L HNO3

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 14.51 ft

Comments

Sampler's Signature: Austin Moore

NEWTON

WELL/SAMPLE POINT APW06 **Purge Method:** Submersable

Date: ~~16 Aug 22~~ 17-Aug-22 Start Time: AM 1248 1421 Finish/Sample Time: 1505

Well Depth (Bottom) From MP: 75.68 ft

Depth to Water From MP: 19.60 ft

Water Column Length: 56.08 ft

Well Water Volume: 33.96 Gal / (L)

Min. Purge Volume: 1 Gal / (L)

Total Purge Volume: 1.8 Gal / (L)

Max Drawdown: ft

Total Drawdown: 0.15 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1411	19.75	200	7.48	863.66	16.52	-138.2	1.3	15.42
2	1417	20.00	↑	7.50	863.19	16.27	-143.7	1.05	170.60
3	1423	20.00	↓	7.51	862.26	16.27	-147.4	0.90	133.39
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: At 600

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☒ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☐ Slight ☒ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	/	
Casing locked/secure	/	
Well cap fits securely.	/	
Good seal/drainage	/	
Well has weep holes		/

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
	General (P, ~~250 mL~~ 500mL)
1	P 25 L HNO3

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 19.79 ft

Comments Could not get flow rate below 200

Sampler's Signature: Austin Moon

NEWTON

WELL/SAMPLE POINT APW07 **Purge Method:** Compressor

Date: 16-Aug-22 Start Time: 1309 Finish/Sample Time: 1356

Well Depth (Bottom) From MP: 82.05 ft Min. Purge Volume: 1 Gal / L

Depth to Water From MP: 46.45 ft Total Purge Volume: 1.5 Gal / L

Water Column Length: 35.6 ft Max Drawdown: — ft

Well Water Volume: 21.36 Gal / L Total Drawdown: 0 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1326	46.45	100	7.07	1043.9	17.26	-107.4	1.24	18.57
2	1327	46.45		7.11	1046.2	17.39	-113.9	0.82	15.98
3	1328	46.45	L	7.14	1043.5	17.34	-116.3	0.68	14.81
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT 600.

Sample Appearance:

Odor: ☐ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	/	
Casing locked/secure	/	
Well cap fits securely.	/	
Good seal/drainage	/	
Well has weep holes	/	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
	General (P, ~~250 mL~~) 500mL
1	1P 250mL HNO3

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 46.45 ft

Comments

Sampler's Signature: Austin Moore

NEWTON

WELL/SAMPLE POINT APW08 **Purge Method:** Compressor

Date: 16-Aug-22 Start Time: 1425 Finish/Sample Time: 1518

Well Depth (Bottom) From MP:	77.39 ft	Min. Purge Volume:	1 Gal / L
Depth to Water From MP:	37.23 ft	Total Purge Volume:	1.4 Gal / L
Water Column Length:	40.16 ft	Max Drawdown:	— ft
Well Water Volume:	24.32 Gal / L	Total Drawdown:	0 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1446	37.23	100	7.13	1106.0	18.43	-120.0	0.92	13.58
2	1447	37.23	1	7.14	1093.4	18.15	-122.8	0.63	12.80
3	1448	37.23	1	7.14	1085.8	17.92	-125.0	0.59	10.90
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT 600

Sample Appearance:

Odor: ☑ None ☐ Slight ☐ Mod. ☐ Strong

Color ☑ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☑ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, ~~250~~ mL) 500mL
1	P 2.5 L HNO3

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 37.23 ft

Comments

Sampler's Signature: Christian Moore

NEWTON

WELL/SAMPLE POINT APW09 **Purge Method:** Compressor

Date: 17-Aug-22 Start Time: 1045 Finish/Sample Time: 1213

Well Depth (Bottom) From MP: ~~28.00~~ AM ft Pump

Depth to Water From MP: 26.58 ft

Water Column Length: 31.77 ft

Well Water Volume: 19.04 Gal / L

Min. Purge Volume: 1 Gal / L

Total Purge Volume: 1.3 Gal / L

Max Drawdown: ft

Total Drawdown: 0.02 ft

Reading (Units)	Time	Depth (ft.)	Flow Rate (mL/min)	pH (s.u.)	Spec Cond (umhos/cm)	Temp (deg C)	ORP (mV)	DO (mg/L)	Turb (NTU)
1	1146	26.56	100	7.25	1369.9	23.68	-100.0	2.95	98.92
2	1147	26.58	1	7.23	1400.0	23.76	-97.5	3.02	820.65
3	1148	26.58	1	7.22	1416.5	23.95	-88.9	3.20	774.02
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT 600

Sample Appearance:

Odor: ☑ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☑ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☐ Slight ☐ Mod ☑ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, ~~250 mL~~) soonV
1	P 2.5L HNO3

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 26.58 ft

Comments Pump had issues with water, got it fixed.

Sampler's Signature: Austin Moon

NEWTON

WELL/SAMPLE POINT APW10 **Purge Method:** Compressor

Date: 8-17-22 Start Time: 1298 Finish/Sample Time: 1345

Well Depth (Bottom) From MP: Pump ft Min. Purge Volume: 1 Gal / L

Depth to Water From MP: 17.66 ft Total Purge Volume: 1.3 Gal / L

Water Column Length: ____ ft Max Drawdown: ____ ft

Well Water Volume: ____ Gal / L Total Drawdown: 1.19 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		(ft.)	(mL/min)	(s.u.)	(umhos/cm)	(deg C)	(mV)	(mg/L)	(NTU)
1	1310	18.26	~~100~~ 150	7.21	521.7	23.22	-6.2	5.47	209.6
2	1311	18.23	100	7.22	495.4	19.91	-24.7	4.13	148.6
3	1312	16.23	100	7.19	496.3	19.95	-14.1	3.94	154.28
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: AT 600

Sample Appearance:

Odor: ☐ None ☐ Slight ☑ Mod. ☐ Strong

Color ☐ None ☐ Slight ☑ Mod. ☐ Strong

Turb: ☐ None ☐ Slight ☐ Mod ☑ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage		✓
Well has weep holes		✓

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, ~~250 mL~~) Soon
1	P 250 mL HNO3

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Final DTW: 18.80 ft

Comments

Sampler's Signature: Austin Moon

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Sam Grant, David Escamilla	Location:	Newton
Weather:	75°, Partly Cloudy, 11 km/h S.	Environment:	Grassy, Gravel Road

Multiparameter Water Meter	Make:	InSitu	Model:	Aquatroll 600	Serial Number:	739449
Water Level Meter	Make:	Heron	Model:	Dipper-T	Serial Number:	19FF2201152HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.94	s.u.	±0.1 s.u.	P	N	NA	MSI	L153-17	6/8/2023
pH 7.00a	7.04	s.u.	±0.1 s.u.				MSI	L172-33	8/23/2023
pH 10.00a	9.97	s.u.	±0.1 s.u.				MSI	L118-08	5/12/2023
SC Zero (DI)	14.97	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1941.3	µS/cm	±5%				Geotech	1GJ517	Oct-22
ORP	226.2 @ 22.7°C	mV	±15 mV				InSitu	1Gk507	Aug-22
DO (Zero pt)	0.06	mg/L	±0.1				Fischer Chemical	168261	8/26/2025
DO (Saturated)	98.5	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

232 mV @ 23°C

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 1235

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.98	s.u.	±0.15 s.u.	P	None	Geotech	1GH562	Aug-22
pH 7.00b	6.88	s.u.	±0.15 s.u.			Geotech	1GD360	Apr-22
pH 10.00b	9.87	s.u.	±0.15 s.u.			Geotech	1GE278	Mar-22
SC 1000	1003.0	µS/cm	±5%			Ricca	2107D48	Jul-23

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 17:48

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.10	s.u.	±0.1 s.u.	P	N	NA	MSI	L153-17	6/8/2023
pH 7.00a	7.10	s.u.	±0.1 s.u.				MSI	L172-33	8/23/2023
pH 10.00a	9.99	s.u.	±0.1 s.u.				MSI	L118-08	5/12/2023
SC 1000	993.5	µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)	0.08	mg/L	±0.1 mg/L				Fischer Chemical	168261	8/26/2025
Turbidity (DI)	0.37	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L153-17	6/8/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	8/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L118-08	5/12/2023
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Fischer Chemical	168261	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature: [signature] Date: 8-15-22

[signature]

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP JL	Location:	Newton
Weather:	60°-74°F clear wind NE 4mph	Environment:	grass, gravel, woods

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	PU26Y	A3
Water Level Meter	Make: Heron	Model: Dipper T2	Serial Number:	10SF2111192HB	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	P	NO	N/A	MSI	L344-09	12/14/2023
pH 7.00a	—	s.u.	±0.1 s.u.	—	—		MSI	L343-07	12/9/2023
pH 10.00a	—	s.u.	±0.1 s.u.	—	—		MSI	M082-04	3/25/2024
SC Zero (DI)	—	µS/cm	0<25 µS/cm	—	—		Pace Labs	N/A (DI)	N/A (DI)
SC ~~2000~~	4500	µS/cm	±5%	P	NO		Geotech	1GK328	Nov-22
ORP	—	mV	±15 mV	—	—		InSitu	1GL481	Sep-22
DO (Zero pt)	9.03	mg/L	±0.1	P	NO		Macron	#000228049	8/26/2025
DO (Saturated)	—	%	97-100%	—	—		Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 0910			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b		s.u.	±0.15 s.u.			Geotech	1GF009	Jun-23
pH 7.00b		s.u.	±0.15 s.u.			Geotech	0GJ268	Oct-22
pH 10.00b		s.u.	±0.15 s.u.			Geotech	1GF458	Jun-23
SC 1000		µS/cm	±5%			Ricca	1111A87	Nov-22

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1625				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	P	NO	—	MSI	L315-04	11/22/2023
pH 7.00a	—	s.u.	±0.1 s.u.	—	—	—	MSI	L172-33	6/23/2023
pH 10.00a	—	s.u.	±0.1 s.u.	—	—	—	MSI	L354-22	1/5/2024
SC ~~1000~~	4440	µS/cm	±5%	P	NO	—	Ricca	2108D48	Jul-23
DO (Zero pt)	9.10	mg/L	±0.1 mg/L	P	—	—	Macron	#000228049	8/26/2025
Turbidity (DI)	010	NTU	<2 NTU	P	—	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments: Horiba Solution used

Signature: [signature] Date: 8/16/2022

Multiparameter Meter Field Calibration Checklist

Field Personnel:	David Escamilla Sam Grant	Location:	Newton
Weather:	65-79°F, sunny, wind W 1 mph	Environment:	gravel road, Tall grass

Multiparameter Water Meter	Make:	InSitu	Model:	Aquatroll 600	Serial Number:	739449
Water Level Meter	Make:	Heron	Model:	Dipper-T	Serial Number:	19FFZZ01152HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.94	s.u.	±0.1 s.u.	P	N	NA	MSI	L153-17	6/8/2023
pH 7.00a	7.02	s.u.	±0.1 s.u.	"	"	"	MSI	L172-33	8/23/2023
pH 10.00a	9.95	s.u.	±0.1 s.u.	"	"	"	MSI	L118-08	5/12/2023
SC Zero (DI)	38.74	µS/cm	0<25 µS/cm	F	Y	0.06	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	0.06	µS/cm	±5%	F	Y	1999.3	Geotech	1GJ517	Oct-22
ORP	+199 227.1	mV	±15 mV	P	N	NA	InSitu	1Gk507	Aug-22
DO (Zero pt)	0.08	mg/L	±0.1				Fischer Chemical	168261	8/26/2025
DO (Saturated)	98.57	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

232 223 mV @ 23C

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 0845			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.02	s.u.	±0.15 s.u.	P	None	Geotech	1GH562	Aug-22
pH 7.00b	6.94	s.u.	±0.15 s.u.	"	"	Geotech	1GD360	Apr-22
pH 10.00b	9.87	s.u.	±0.15 s.u.	"	"	Geotech	1GE278	Mar-22
SC 1000	1034.2	µS/cm	±5%	"	"	Ricca	2107D48	Jul-23

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1435				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.10	s.u.	±0.1 s.u.	P	N	NA	MSI	L153-17	6/8/2023
pH 7.00a	7.02	s.u.	±0.1 s.u.	"	"	"	MSI	L172-33	8/23/2023
pH 10.00a	9.91	s.u.	±0.1 s.u.	"	"	"	MSI	L118-08	5/12/2023
SC 1000	989.35	µS/cm	±5%	"	"	"	Ricca	2108D48	Jul-23
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	"	"	"	Fischer Chemical	168261	8/26/2025
Turbidity (DI)	2.00	NTU	<2 NTU	"	"	"	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L153-17	6/8/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	8/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L118-08	5/12/2023
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Fischer Chemical	168261	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:		Date:	8/16/2022

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	Newton
Weather:	79°-63° wind NNE 4mph	Environment:	Grassy, partly cloudy
Multiparameter Water Meter	Make: AT	Model: 600	Serial Number: ~~24600~~ AM-762098
Water Level Meter	Make: Heron	Model: WT	Serial Number: 19FF211192 HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	5.75	s.u.	±0.1 s.u.	F	Y	4.00	MSI	L315-04	11/22/2023
pH 7.00a	6.81	s.u.	±0.1 s.u.	F	Y	7.00	MSI	L172-33	6/23/2023
pH 10.00a	9.92	s.u.	±0.1 s.u.	P	Y	10.00	MSI	L354-22	1/5/2024
SC Zero (DI)	7.33	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2313.8	µS/cm	±5%				Geotech	1GK328	Nov-22
ORP	215.7	mV	±15 mV				InSitu	1GL481	Sep-22
DO (Zero pt)	0.05	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	97.34	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.92	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 0906

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.02	s.u.	±0.15 s.u.	P		Geotech	1GF009	Jun-23
pH 7.00b	6.88	s.u.	±0.15 s.u.	P		Geotech	0GJ268	Oct-22
pH 10.00b	9.87	s.u.	±0.15 s.u.	P		Geotech	1GF458	Jun-23
SC 1000	1395.58	µS/cm	±5%	P		Ricca	2108D48	Jul-23

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 1714

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.23	s.u.	±0.1 s.u.	F	Y	4.00	MSI	L315-04	11/22/2023
pH 7.00a	7.16	s.u.	±0.1 s.u.	F	Y	7.00	MSI	L172-33	6/23/2023
pH 10.00a	9.94	s.u.	±0.1 s.u.	P	Y	10.00	MSI	L354-22	1/5/2024
SC 1000	1401.0	µS/cm	±5%	P			Ricca	2108D48	Jul-23
DO (Zero pt)	0.02	mg/L	±0.1 mg/L	P			Macron	#000228049	8/26/2025
Turbidity (DI)	1.54	NTU	<2 NTU	P			Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Austin Moore	Date:	16-Aug-22

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Kyle Lane	Location:	Newton Power
Weather:	84° sunny light cloud	Environment:	Dry

Multiparameter Water Meter	Make:	In-Situ	Model:	A+ 600	Serial Number:	762098
Water Level Meter	Make:		Model:		Serial Number:	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	N/a	N/a	MSI	L344-09	12/14/2023
pH 7.00a	6.98	s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
pH 10.00a	10.07	s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC Zero (DI)	17.57	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1964.20	µS/cm	±5%				Geotech	1GK328	Nov-22
ORP 23.44	216.2	mV	±15 mV				InSitu	1GL481	Sep-22
DO (Zero pt)	0.05	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.70	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.75	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 8:57

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.02	s.u.	±0.15 s.u.	P	N/a	Geotech	1GF009	Jun-23
pH 7.00b	6.95	s.u.	±0.15 s.u.			Geotech	0GJ268	Oct-22
pH 10.00b	10.04	s.u.	±0.15 s.u.			Geotech	1GF458	Jun-23
SC 1000	1013.0	µS/cm	±5%			Ricca	1111A87	Nov-22

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 16:39

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.08	s.u.	±0.1 s.u.	P	N/a	N/a	MSI	L315-04	11/22/2023
pH 7.00a	7.04	s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
pH 10.00a	10.05	s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000	1040.5	µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)	0.03	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	1.89	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Kyle Lane	Date:	8-17-22

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Sam Grant, David Escamilla	Location:	Newton
Weather:	75-81°, Sunny, 3 km/h NE	Environment:	gravel road, Tall grass

Multiparameter Water Meter	Make:	InSitu	Model:	Aquatroll 600	Serial Number:	739449
Water Level Meter	Make:	Heron	Model:	Dipper-T	Serial Number:	19FF220115 2HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.99	s.u.	±0.1 s.u.	P	N	NA	MSI	L153-17	6/8/2023
pH 7.00a	7.07	s.u.	±0.1 s.u.	↓	↓	↓	MSI	L172-33	8/23/2023
pH 10.00a	9.99	s.u.	±0.1 s.u.	↓	↓	↓	MSI	L118-08	5/12/2023
SC Zero (DI)	12.21	µS/cm	0<25 µS/cm	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1991.3	µS/cm	±5%	↓	↓	↓	Geotech	1GJ517	Oct-22
ORP 227.8@21.81		mV	±15 mV	↓	↓	↓	InSitu	1Gk507	Aug-22
DO (Zero pt)	0.09	mg/L	±0.1	↓	↓	↓	Fischer Chemical	168261	8/26/2025
DO (Saturated)	97.45	%	97-100%	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)

233 mV @ 22°C

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 0849

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.07	s.u.	±0.15 s.u.	P	None	Geotech	1GH562	Aug-22
pH 7.00b	6.89	s.u.	±0.15 s.u.	↓	↓	Geotech	1GD360	Apr-22
pH 10.00b	9.90	s.u.	±0.15 s.u.	↓	↓	Geotech	1GE278	Mar-22
SC 1000	982.24	µS/cm	±5%	↓	↓	Ricca	2107D48	Jul-23

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 1506

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.10	s.u.	±0.1 s.u.	P	N	NA	MSI	L153-17	6/8/2023
pH 7.00a	7.03	s.u.	±0.1 s.u.	↓	↓	↓	MSI	L172-33	8/23/2023
pH 10.00a	9.90	s.u.	±0.1 s.u.	↓	↓	↓	MSI	L118-08	5/12/2023
SC 1000	1052.4	µS/cm	±5%	↓	↓	↓	Ricca	2108D48	Jul-23
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	↓	↓	↓	Fischer Chemical	168261	8/26/2025
Turbidity (DI)	0.93	NTU	<2 NTU	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L153-17	6/8/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	8/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L118-08	5/12/2023
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Fischer Chemical	168261	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:		Date:	8-17-22

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP	Location:	Newton
Weather:	73°-76°F Sunny wind NE 4mph	Environment:	grass, gravel, tile

Multiparameter Water Meter	Make: Hach	Model: U-5000	Serial Number:	PW2GY5D3	
Water Level Meter	Make: Heron	Model: Dipper-T2	Serial Number:	19SC 2202131M	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	P	NO	—	MSI	L344-09	12/14/2023
pH 7.00a	—	s.u.	±0.1 s.u.	—	—	—	MSI	L343-07	12/9/2023
pH 10.00a	—	s.u.	±0.1 s.u.	—	—	—	MSI	M082-04	3/25/2024
SC Zero (DI)	—	µS/cm	0<25 µS/cm	—	—	—	Pace Labs	N/A (DI)	N/A (DI)
~~SC 2000~~	4500	µS/cm	±5%	P	NO	—	Geotech	1GK328	Nov-22
ORP	—	mV	±15 mV	—	—	—	InSitu	1GL481	Sep-22
DO (Zero pt)	0.07	mg/L	±0.1	P	NO	—	Macron	#000228049	8/26/2025
DO (Saturated)	—	%	97-100%	—	—	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 0906

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	—	s.u.	±0.15 s.u.	—	—	Geotech	1GF009	Jun-23
pH 7.00b	—	s.u.	±0.15 s.u.	—	—	Geotech	0GJ268	Oct-22
pH 10.00b	—	s.u.	±0.15 s.u.	—	—	Geotech	1GF458	Jun-23
SC 1000	—	µS/cm	±5%	—	—	Ricca	1111A87	Nov-22

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 1632

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	P	NO	—	MSI	L315-04	11/22/2023
pH 7.00a	—	s.u.	±0.1 s.u.	—	—	—	MSI	L172-33	6/23/2023
pH 10.00a	—	s.u.	±0.1 s.u.	—	—	—	MSI	L354-22	1/5/2024
~~SC 1000~~	4500	µS/cm	±5%	P	NO	—	Ricca	2108D48	Jul-23
DO (Zero pt)	9.10	mg/L	±0.1 mg/L	P	NO	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	—	—	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

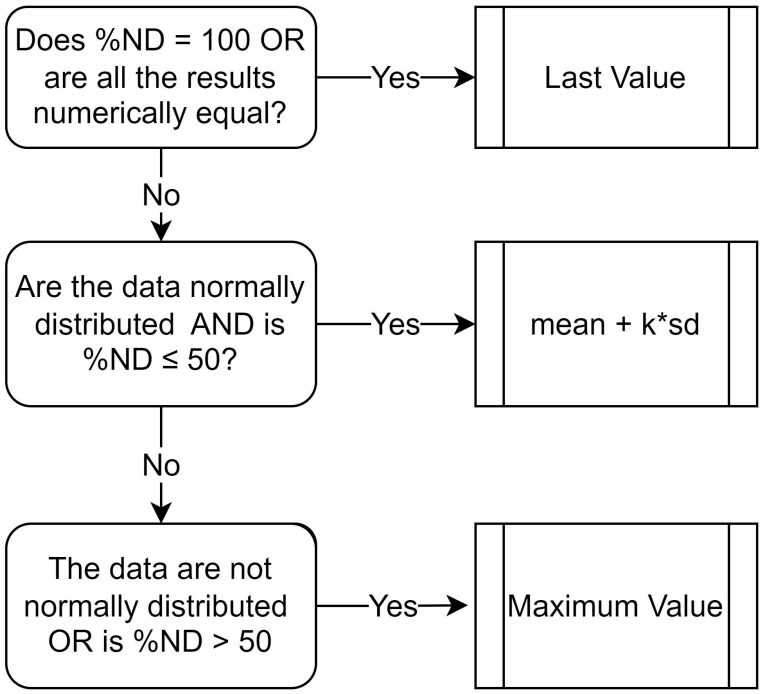
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	L315-04	11/22/2023
7.00a		s.u.	±0.1 s.u.				MSI	L172-33	6/23/2023
10.00a		s.u.	±0.1 s.u.				MSI	L354-22	1/5/2024
SC 1000		µS/cm	±5%				Ricca	2108D48	Jul-23
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

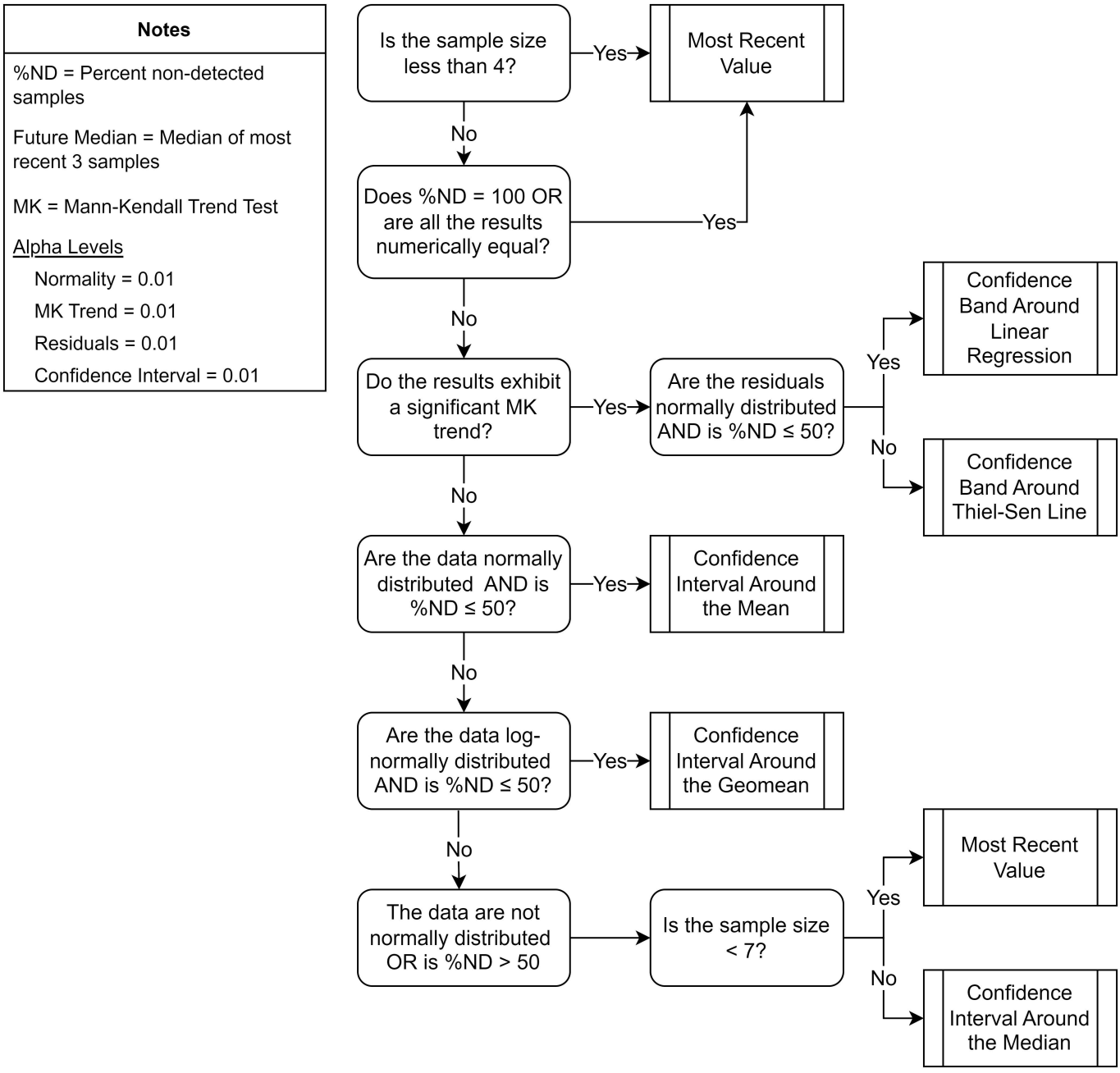
Signature:	[signature]	Date:	8/17/2022

APPENDIX B
STATISTICAL METHODOLGY FOR DETERMINATION OF BACKGROUND VALUES

Notes
%ND = Percent non-detected samples sd = standard deviation k = kappa for tolerance limit (95% confidence/95% coverage)



APPENDIX C
STATISTICAL METHODOLGY FOR DETERMINATION OF STATISTICALLY SIGNIFICANT LEVELS


Notes
%ND = Percent non-detected samples
Future Median = Median of most recent 3 samples
MK = Mann-Kendall Trend Test
Alpha Levels
Normality = 0.01
MK Trend = 0.01
Residuals = 0.01
Confidence Interval = 0.01
Is the sample size less than 4?
Yes
Most Recent Value
No
Does %ND = 100 OR are all the results numerically equal?
Yes
No
Do the results exhibit a significant MK trend?
Yes
Are the residuals normally distributed AND is %ND ≤ 50?
Yes
Confidence Band Around Linear Regression
No
Confidence Band Around Thiel-Sen Line
No
Are the data normally distributed AND is %ND ≤ 50?
Yes
Confidence Interval Around the Mean
No
Are the data log-normally distributed AND is %ND ≤ 50?
Yes
Confidence Interval Around the Geomean
No
The data are not normally distributed OR is %ND > 50
Is the sample size < 7?
Yes
Most Recent Value
No
Confidence Interval Around the Median